August 15, 2013

Project 4088115718

Mr. Jamey Watt
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, California 94105

Subject: **Phase 1 Pre-Design Investigation – Groundwater Sampling, Vertical Flow Measurements, and Slug Test Findings**
North Hollywood Operable Unit, Second Interim Remedy Groundwater Remediation Design

Dear Mr. Watt:

AMEC Environment & Infrastructure, Inc. (AMEC), is pleased to submit this Phase 1 Pre-Design Investigation findings letter, on behalf of Honeywell International Inc., and Lockheed Martin Corporation to the U.S. EPA. This letter summarizes findings associated with our first of two semiannual sampling events.

If you have any questions regarding the contents in this letter, please contact Michael Taraszki at (510) 663-3996.

Sincerely yours,
AMEC Environment & Infrastructure, Inc.

Michael Taraszki, PG, CHG, PMP
Principal Hydrogeologist

MT/cpr
\\oad-fs1\doc_safe\16000s\162830\3000\phase i_pre-design investigation summary\01_text_cvr_letter\cvr_ltr.docx

Distribution:
Ms. Carolyn Monteith (Lockheed Martin)
Mr. Benny Dehghi (Honeywell)
Mr. Vahe Dabbaghian (LADWP)
Ms. Poonam Acharya (DTSC)
Mr. Chi Diep and Susan Brownstein (CDPH)
Mr. Larry Moore (RWQCB-LA)
Mr. Richard Slade (ULARA Watermaster)
Mr. John Lindquist (CH2M Hill)

AMEC Environment & Infrastructure, Inc.
2101 Webster Street, 12th Floor
Oakland, California 94612-3066
USA
Tel (510) 663-4100
Fax (510) 663-4141
amec.com

August 9, 2013

Project 4088115718

Mr. Benny Dehghi
Remediation Manager, Honeywell International, Inc.
2525 W. 190th Street
Torrance, California 90504

Ms. Carolyn Monteith
Remediation Project Lead
2950 North Hollywood Way, Suite 125
Burbank, California 91505

Subject: Phase I Pre-Design Investigation – Groundwater Sampling, Vertical Flow Measurements, and Slug Test Findings
North Hollywood Operable Unit, Second Interim Remedy
Groundwater Remediation Design

Dear Mr. Dehghi and Ms. Monteith:

This letter summarizes our findings from the first sampling event of the Phase 1 Pre-Design Investigation. All activities were performed in accordance with our Work Plan and Sampling and Analysis Plan (SAP), both dated September 10, 2012. The intent of this summary memo is to present the results of the first semiannual sampling event and the first two quarterly groundwater depth measurement events associated with the Phase 1 – Pre-Design Investigation. A detailed evaluation of these results will be presented under separate cover following completion of the second semiannual sampling event and last two quarterly groundwater depth measurement events associated with the Phase 1 Pre-Design Investigation.

SURVEYING ACTIVITIES

The horizontal locations and top-of-casing elevations of 29 wells were surveyed with respect to horizontal datum NAD83, Zone 5, and vertical datum NAVD88 by Dulin and Boynton Surveyors of Signal Hill, California on December 20, 2012, in accordance with the SAP. Surveyed top-of casing elevations are included in Table 1.

The survey was primarily performed because older North Hollywood Operable Unit (NHOU) wells were originally surveyed with respect to the NGVD29 vertical datum. In addition, the surveying was necessary because casing elevations may have been altered by incidental damage or natural settling as discussed in the Final Data Gap Analysis (DGA), dated March 14, 2012. Differences between measured top-of-casing elevations and those historically reported ranged from 0.70 to 5.76 feet.

AMEC Environment & Infrastructure, Inc.
2101 Webster Street, 12th Floor
Oakland, California 94612-3066
USA
Tel (510) 663-4100
Fax (510) 663-4141
amec.com

DEPTH TO WATER MEASUREMENTS

Depth to water and total well depth measurements were collected from 59 monitoring wells on December 20, 2012 and from 56 wells on March 7, 2013, in accordance with the SAP. Depth to water measurements and groundwater elevations are presented in Table 1. Groundwater elevation contours based on the December 2012 measurements are illustrated on Figures 1a through 4b. Historically, there have been several interpretations regarding the hydrogeology of the NHOU area. Most recently, based on geophysical data analyses performed on selected wells within the NHOU study area, the subsurface has been divided into three hydrostratigraphic units including the following: the A-Zone, which is generally finer grained and has a relatively lower hydraulic conductivity, extending to depths ranging from the water table, which is currently approximately 270 feet below ground surface (bgs), to 400 feet bgs; the underlying B-Zone, which is generally coarser grained and has a relatively higher conductivity extending approximately 60 to 80 feet below the bottom of the A-Zone; and the Deeper Units underlying the B-Zone, which are generally associated with higher salinity. The eight NHOU extraction wells penetrate the A-Zone. As a result, contours on figures illustrating A-Zone groundwater elevations were interpreted with respect to the influence of pumping from these extraction wells.

Results of the December 2012 depth to water measurements indicate the following:

- Based on analysis of measurements collected at wells screened in the A-Zone, the lateral hydraulic gradient in the northeast portion of the study area was to the south-southwest with an approximate magnitude of 0.001 feet/foot (ft/ft). To the south and southeast of this area, the groundwater gradient rotates counter-clockwise, shifting to the south by approximately Saticoy Street (0.50 miles north of the Former Bendix facility), then to the southeast, and ultimately to the east with increasing magnitudes in the southeast portion of the NHOU. In the southeast corner of the NHOU, the magnitude of the lateral hydraulic gradient was approximately 0.007 ft/ft where the influence of the Burbank Operable Unit (BOU) extraction wells is evident in the interpolated groundwater contours, which are presented on A-Zone Figures 1a through 4a.
- Depth to water measurements were collected in A-Zone wells NH-VPB-09 and NH-VPB-10 within the northeast portion of the study area; however, calculated groundwater elevations for these wells were not used for contouring because they are approximately 20 to 30 feet higher than those in the nearest adjacent wells also screened in the A-Zone. The differences in water level elevation may be a result of inhibited groundwater flow across the Verdugo Fault, which parallels the base of the Verdugo Mountains to the northeast, or associated fault splays.
- Groundwater contours for the B-Zone are presented in Figures 1b through 4b. Based on analysis of groundwater elevation measurements collected at wells screened in the B-Zone, groundwater flow directions and magnitudes of lateral hydraulic gradients in this zone were generally consistent with those in the A-Zone in the western portion of the NHOU. Based partly on groundwater elevations reported in the Semiannual Groundwater Monitoring Report, Fourth Quarter 2012, Burbank

Operable Unit (Arcadis, 2013), groundwater in the eastern B-Zone appears to be less influenced by the BOU extraction wells than in the A-Zone resulting in more shallow gradients and more east-southeasterly flow directions in the B-Zone as compared with an easterly flow direction in the A-Zone in the eastern portion of the NHOU.

- Based on groundwater elevation measurements at collocated wells (Table 1), slight upward or downward vertical gradients up to approximately 0.005 feet/foot (ft/ft) were calculated between the A- and B-zones and within the A-Zone at most locations. Although these small values approach the limit of accuracy associated with manual depth to water measurements, these potential vertical flow directions are consistent with electronic borehole flow measurements conducted at select monitoring wells as discussed below.

Results of the March 2013 measurements indicate the following:

- Generally, groundwater elevation measurements in March 2013 were within 1 to 2 feet of measurements in December 2012 with approximately half of the measurements indicating higher elevations and half indicating lower (Table 1). Lateral hydraulic gradient directions and magnitudes were also generally consistent with those calculated for December 2012.
- Based on measurements collected in March 2013 at collocated wells screened at different depths, slight downward vertical gradients up to approximately 0.005 ft/ft were calculated between the A and B-Zones and within the A-Zone at most locations.

GROUNDWATER SAMPLING

Between December 4, 2012 and January 7, 2013, low-flow sampling methods were used to collect 41 depth-discrete groundwater samples from 25 monitoring wells screened in either the A-Zone, B-Zone, or across both zones in accordance with the SAP. Each sample was analyzed for the chemicals of concern (COCs) including VOCs and emerging contaminants, and also general chemistry constituents. The analytical suites and associated methods for each sample were based on Table 2-1 of the SAP. The analyses included the following:

- Volatile organic compounds by EPA Methods 8260 and 524.2;
- 1,2,3-trichloropropane by EPA Method SRL 524M-TCP;
- 1,4-dioxane by EPA Methods 8270C and 522;
- N-nitrosodimethylamine (NDMA) by EPA Methods 1625CM and 521;
- N-nitrosodibutylamine (NDBA) by EPA Method 521;
- N-nitrosodi-n-propylamine (NDPA) by EPA Method 521;
- N-nitrosodiethylamine (NDEA) by EPA Method 521;

- N-nitrosomethylethyl amine (NMEA) by EPA Method 521;
- N-nitrosopyrollidine (NPYR) by EPA Method 521;
- Perchlorate by EPA Method 314.0;
- Total chromium by EPA Method 200.8;
- Hexavalent chromium by EPA Method 218.6;
- Cations (Ca, Mg, Na, K, Fe) by EPA Method 200.7
- Anions (nitrate, nitrite, Cl, SO4, total nitrate/nitrate) by EPA Method300.0;
- Total hardness by EPA Method 200.7;
- Alkalinity by EPA Method SM2320B; and
- Total dissolved solids by EPA Method SM2540C.

Additional depth-discrete samples were collected from four wells for VOC analyses using passive diffusion bags (PDBs) to provide vertical chemistry profiles within the wells in accordance with the SAP. In these four wells, samples were collected at 10-foot increments throughout the screened intervals beginning at 3 feet below the top of each screen. A total of 24 vertical profile samples were collected in the four wells.

Isoconcentration contours for the four primary COCs - trichloroethene (TCE), tetrachloroethene (PCE), 1,4-dioxane, and hexavalent chromium in the A-Zone are illustrated on Figures 1a through 4a, and in the B-Zone on Figures 1b through 4b, respectively. The contours are based on the analytical results from the December 2012 first semi-annual Phase 1 Pre-Design groundwater sampling event, fourth quarter 2012 data reported for the former Bendix and Lockheed Martin facilities, and the most recent data available from other wells in the investigation area. Laboratory analytical results from the December 2012 semi-annual sampling event are summarized in Tables 2a and 3a for the A-Zone and Tables 2b and 3b for the B-Zone, respectively.

Cluster wells screened across the A-Zone and B-Zone were preferentially selected for sampling during the first semi-annual Phase 1 Pre-Design investigation groundwater sampling event so that depth-discrete results from those zones could be compared with historical results designated as associated with Depth Region 2, which roughly corresponds to the B-Zone extending slightly into the overlying A-Zone and down into the underlying deeper units. A comparison of current and historical analytical results for the four primary COCs by depth region and zone is presented in Table 4. Sampling the A-Zone wells at these locations during the second semi-annual sampling event will be performed to further delineate the COC distribution in these areas (see “Additional Sampling” table below).

Analytical laboratory reports were reviewed for accuracy and completeness and data validation was performed with a qualified third party pursuant to the National Functional Guidelines (USEPA, 2008, 2010). Data validation results are described in a narrative included in

Attachment C. The distribution of the primary COCs is discussed below, with a focus on concentrations greater than ten times (10x) the maximum contaminant level (MCL), or other relevant regulatory level.

A-Zone TCE

- The lateral extent of TCE distribution in the A-Zone (Figure 1a) was similar to the kriged distribution based on maximum concentrations between 2007 and 2011as illustrated in the DGA, but concentrations were generally lower in December 2012.
- Concentration areas that exceed 50 µg/L (10x the 5 µg/L MCL) are largely represented by wells that have not been sampled recently, such as 4918B at the Penrose Landfill, NH-C09-310 downgradient of Hewitt Pit, and NH-C17-255 and 3831Q in the southeast corner of the NHOU. Given the overall decreasing trend in concentrations, these wells should be sampled during the second semi-annual event. NH-C12-280, for which the most recent available TCE data is from October 2011, is located between Victory/Vineland Landfill and the former Lockheed Martin facilities down/cross-gradient of concentrations that exceed 10x the MCL at well LC1-CW06 and should be sampled during the next semi-annual event.
- Wells PST-MW1P and PST-MW2P at the Pacific Steel facility could not be located and their status is unknown according the Regional Water Board. The wells are located on the eastern margin of an area of TCE concentrations in excess of 10x the MCL in the vicinity of NHE-3 and could provide useful TCE concentration data to delineate the A-Zone TCE plume. The wells should be located and sampled during the next semi-annual event, if possible. If not, installation of replacement wells is recommended. NH-C10-280, which is located downgradient of this area, should also be sampled during the next event because the most recent available data from this well are from October 2010.

A-Zone PCE

- The lateral extent of PCE distribution in the A-Zone was also similar to that presented in the DGA (Figure 2a). Generally, PCE is less broadly distributed than TCE.
- With the exception of NH-C01-325 downgradient of the Strathern Inert Landfill, PCE concentrations exceeding 50 µg/L (10x the 5 µg/L MCL) were limited to wells downgradient of the Lockheed Martin facility in the BOU.
- Near the Lockheed Martin facility, the area with PCE concentrations greater than 10x the MCL is largely represented by older data from LB6-CW03R, LB6-CW09, LB6-CW10, and LB6-CW17, which are not currently sampled as part of the BOU monitoring program. Thus, the PCE distribution presented the eastern portion of the NHOU (Figure 2a) is not consistent with the interpretation of PCE in the adjacent western portion of the BOU presented in the Semiannual Groundwater Monitoring Report, Fourth Quarter 2012, Burbank Operable Unit (Arcadis, 2013), which limited

data on the figures to recent sampling events. Due to the presentation of older data (elevated concentrations), the PCE distribution presented in Figure 2a is significantly greater than that indicated in the corresponding PCE distribution presented in the BOU (Arcadis, 2013).

- NH-C10-280 and PST-MW1P, PST-MW2P (if located) should be sampled during the next semiannual event, as discussed above, with regard to TCE. The wells could also provide valuable PCE data in the area between the former Bendix facility and the downgradient NHE wells.

A-Zone 1,4-Dioxane

- The lateral extent of 1,4-dioxane distribution in the A-Zone (Figure 3a) was similar to that presented in the DGA with the exception of the eastern border of the NHOU where the most recent data indicate concentrations greater than the 1 µg/L notification level (NL). The distribution of 1,4-dioxane above the NL in this area is consistent with the limited 1,4-dioxane data presented in the adjacent portion of the BOU (Arcadis,2013).
- Fourth Quarter 2012 data reported near the former Bendix facility indicate concentrations exceeding 10 µg/L (10x the 1 µg/L NL) were restricted to a small area onsite and immediately downgradient of the facility.
- Outside the vicinity of the former Bendix facility, the only groundwater sample with a 1,4-dioxane concentration that exceeded 10x the 1 µg/L notification level was collected from well 4918A adjacent to the southern boundary of the Penrose Landfill.

A-Zone Hexavalent Chromium

- The lateral extent of hexavalent chromium distribution in the A-Zone (Figure 4a) was generally consistent with that presented in the DGA.
- Hexavalent chromium concentrations that exceeded the Los Angeles Department of Water and Power (LADWP) voluntary 5 µg/L cleanup level were primarily associated with wells in the area south of the former Bendix facility.
- The NH-C18 and NH-C21 cluster wells are located cross-gradient (south) relative to the former Bendix facility and are hydraulically isolated from the facility by extraction wells NHE-2 and NHE-3. In addition to the isolated location of the wells relative to the former Bendix facility, the deeper occurrence of elevated concentrations of hexavalent chromium in these wells makes its origin(s) in this area unclear.
- Recent concentrations in NHE-4 and the NH-C10 well cluster did not exceed the voluntary cleanup level. Data from wells PST-MW1P and PST-MW2P, if located or replaced, could help to define the plume in this area.
- The hexavalent chromium concentration in NH-C11-295 at the Hewitt Pit slightly exceeded the voluntary cleanup level; however, the most recent available analytical result is from December 2010. The well should be sampled during the next semi-

annual event. The concentration in 3850AB, near the eastern area of the NHOU, also slightly exceeded the cleanup level.

B-Zone TCE

- The lateral extent of TCE distribution in the B-Zone was larger than that presented in the DGA, and comprises an elongated plume extending south and southeast from NH-C05-460 (Figure 1b).
- Concentrations of TCE in the B-Zone that exceeded 50 µg/L (10x the 5 µg/L MCL) largely occur upgradient and cross-gradient of the former Bendix facility, which indicates a source in the northern portion of the study area, and possibly also in the vicinity of the former Hewitt Pit (based on data from downgradient well NH-C20-380). A concentration greater than 50 µg/L was also detected in GW-11-352, south and cross-gradient of the former Bendix facility.
- The highest TCE concentration in the B-Zone was measured in the groundwater sample collected from well NH-C05-460, for which the most recent available analysis is from January 2010. If analytical results from recent samples collected by LADWP are not available prior to the next semiannual event, this well should be included in that sampling effort.

B-Zone PCE

- The lateral extent of PCE distribution was similar to that presented in the DGA, and elevated concentrations were limited to the area downgradient of the Lockheed Martin facility (Figure 2b).
- PCE concentrations in the B-Zone that exceeded 50 µg/L (10x the 5 µg/L MCL) were limited to wells LB6-CW08 and LB6-CW14 at the BOU, for which the most recent available data are from January 1997 and December 2006, respectively.

B-Zone 1,4-Dioxane

- The lateral extent of 1,4-dioxane distribution in the B-Zone was more widespread than that presented in the DGA because samples were collected from a larger number of wells than was previously available (Figure 3b).
- The maximum concentration of 1,4-dioxane detected in the B-Zone was 9.7 µg/L in well 4918A, which is located immediate downgradient of the closed Penrose landfill in the northern portion of the NHOU.
- 1,4-Dioxane concentrations in the B-Zone did not exceed 10 µg/L (10x the 1 µg/L notification level) in any of the samples collected.

B-Zone Hexavalent Chromium

- The lateral extent of hexavalent chromium distribution was smaller than that presented in the DGA; however, concentrations were higher in the area south of the former Bendix facility and in the western NHE wells (Figure 4b).
- Hexavalent chromium concentrations in NH-C18-365 and NH-C21-340 exceeded the LADWP voluntary 5 µg/L cleanup level. The occurrence of hexavalent chromium in the B-Zone at these locations further suggests concentrations in this area may be distinct from those observed in the A-Zone north of the NHE extraction wells, as discussed above. A depth discrete B-Zone sample should be collected from NH-C15-330, which is the nearest downgradient well, during the next semiannual sampling event.

TCE Vertical Profiles

- Concentrations of TCE measured in A-Zone vertical profile samples were generally consistent throughout the screened intervals of NH-C23-310 and NH-C19-290, respectively, west of the former Bendix facility (Figure 1a). TCE concentrations in NH-C19-360, which is screened across the A and B-Zones, decreased with depth. The decreasing concentrations in this well are consistent with the occurrence of higher concentrations in the A-Zone at this location, the well being screened across the A and B-Zones, and vertical flow logging that indicated downward flow within the screen at the time sampling occurred (as discussed below).
- Concentrations of TCE detected in B-Zone vertical profile samples within NH-C19-360 were within 10% of one another. TCE concentrations within NH-C23-400 were generally consistent in the middle depths, but lower at the top and bottom of the screened interval. The lower concentration at the top of the NH-C23-400 screen is consistent with the occurrence of lower concentrations in the A-Zone at this location. Downward vertical flow was measured within the screen of NH-C23-400 (discussed below). Based on the electronic borehole flow measurements, the lower concentrations at the bottom of the screened interval correlate with depths below the zone of downward vertical flow and, therefore, may be more representative of groundwater at that depth than samples collected within the zone of downward flow, which were subjected to more in-well mixing.

PCE Vertical Profiles

- Concentrations of PCE in vertical profile samples were generally consistent throughout the screened intervals. Concentrations are low in the western portion of the study area where vertical profile samples were collected and concentrations in each screen typically varied by less than 1 µg/L, and never by more than 2 µg/L.

Inorganic Groundwater Quality Parameter Evaluation

- Several inorganic groundwater quality parameters were selected for analysis during the first semi-annual Phase 1 Pre-Design investigation groundwater sampling event (primarily December 2012) including, major cations (calcium, sodium, manganese, and potassium) and anions (nitrate, sulfate, chloride and carbonate). Carbonate was reflected in a total alkalinity analysis as calcium carbonate. The results of these analyses were plotted on Piper diagrams utilizing AQ·QA software (Rockware). Piper, or tri-linear, diagrams plot general water quality data in a form that visually differentiates samples based on relative percent differences for specific anions and/or cations.
- The figures presented in Attachment A (Figure A-1, A-Zone and B-Zone wells; Figure A-2, A-Zone wells; and Figure A-3, B-Zone wells) suggest generally similar water quality parameters in all wells and in B-Zone wells, in particular. Analytical data from A-Zone wells suggest a slightly greater variability in water quality parameters as might be expected due to the influence of surface infiltration and vulnerability to various surface sources. As indicated In Figures A-1 and A-2, the general chemistry signatures for groundwater samples collected from two A-Zone wells, 4909C at 293 feet bgs and NH-C18-270 at 270 feet bgs, samples were significantly different than the other samples.
- The AQ·QA software also identified a general cation/anion imbalance for about two-thirds of the samples, typically indicating a surplus of cations (or deficit of anions), suggesting there are additional anionic species that were not assessed by the Piper analysis. (The software regards an acceptable balance to be no more than 2 percent difference between cations and anions.) The nature of the missing components of the ion balance is not apparent in the data set.

ELECTRONIC BOREHOLE FLOW MEASUREMENTS

Vertical flow was measured within nine monitoring wells between December 10, 2012 and January 28, 2013 using a Quantum Engineering, Inc. electronic borehole flow (EBF) meter. These wells were selected because they were constructed with well screens that penetrate both the A- and B-Zones. Flow was measured under ambient conditions (i.e., without pumping stress at the test well) within the screened interval of each well in accordance with the SAP. Table 5 summarizes the results of EBF profiling and graphs of flow rate data from each measured well are illustrated on Figures 5 through 13 (positive and negative values reflect upward and downward vertical flow, respectively).

Downward vertical flow was observed in seven of the nine wells measured. The highest downward flow rate was measured at 0.21 gallons per minute (gpm) in NH-C10-360. In NH-C10-360 and NH-C19-290, which are screened across the A and B-Zones, the inflection point above which water was entering the well screen and below which water was leaving the well screen was generally consistent with previous estimates of the A-Zone/B-Zone contact depth at those well locations. Upward flow was measured within A-Zone well NH-C23-310, which is consistent with groundwater elevation measurements collected at that well cluster

indicating an upward vertical gradient in the A-Zone, although the cause of the upward vertical gradient in this area is unknown. Upward flow was also observed near the bottom of NH-C19-290 over an interval that correlates with a silt unit, although it is not clear if this flow reversal is the result of local geologic conditions. Flow data from B-Zone well NH-C05-460 comprise an incomplete flow profile because the cable of the meter was not long enough to reach the entire screened interval.

PNEUMATIC SLUG TESTS

Pneumatic slug tests were performed at 14 monitoring wells between January 3 and February 6, 2013. Tests were performed in accordance with the methods described in the SAP. The static water column at the test wells was displaced by the introduction of compressed nitrogen at multiple pressures to induce water column displacements of up to 2.5 feet. Table 6 summarizes the results of the pneumatic slug tests. Time-drawdown curves were analyzed to estimate hydraulic conductivity (K) in each well using the AQTESOLV ® software package. Calculated K values at each well relative to midpoint screen depth are graphically depicted on Figure 14 and individual curve matches are included in Attachment B.

No significant correlation between pressure and hydraulic conductivity was observed in the data. Generally, K results for wells screened within the A-Zone ranged between 20 and 50 feet/day and for wells screened in either the B-Zone or between the A and the B-Zone between 60 and 120 feet/day. Qualitatively, time-drawdown curves for wells screened within the A-Zone tended to show critically damped, or non-oscillatory, conditions. For time-drawdown curve analysis, unconfined conditions were assumed for each test. The Springer-Gelhar analysis for curve fitting was employed for all time-drawdown curves. For non-oscillatory tests, the Bouwer-Rice analysis was also performed, which yielded similar results to the Springer-Gelhar curve fits. For all analyses, it was assumed that there was no vertical anisotropy in the vicinity of the test well. Although this assumption may not necessarily be valid in all cases, and adjusting vertical anisotropy to match the groundwater flow model may yield greater K value estimates, the A-Zone and B-Zone pneumatic slug test data are consistent with the site conceptual model of a hydraulically distinct A-Zone overlying a relatively more permeable B-Zone.

SUMMARY OF DEVIATIONS FROM THE WORK PLAN

Investigation activities included in the work plan that could not be completed are summarized below.

Quarterly groundwater level measurements could not be collected at the following wells:

- NH-VPB-04 in December 2012 and March 2013 because a car was parked above it. NH-VPB-04 was intended as a substitute for NH-C04-240 which was specified in the work plan.
- The NH-C02 cluster in March 2013 because the road had been repaved and the wells were covered with asphalt.

Groundwater samples could not be collected from the following wells:

- PST-MW-1P and PST-MW-2P at the Pacific Steel Treating facility because they could not be located; the wells may have been paved over or destroyed, although records indicating their destruction cannot be found.
- 4909F because access was denied by Vulcan Materials, which requested sampling be deferred until a replacement well is installed.
- 4928A because access was denied by Los Angeles County, and
- NH-10 because it has been destroyed.

Vertical groundwater flow could not be measured in the following wells:

- NH-C05-320 because the dedicated pump could not be removed from the well.
- NH-C05-460 could not be completely logged because the meter cable was not long enough to span the entire interval.

Pneumatic slug tests could not be performed on the following wells:

- NH-C07-300 because the water table was below the top of the well screen preventing pressurization of the well, and
- NH-C24-410 and NH-VPB-04 because the exposed well casings were not long enough to attach the test manifold.

ADDITIONAL SAMPLING

Based on findings from the first semiannual groundwater sampling event and testing activities, the following wells will be additionally included in the second Phase 1 Pre-Design semi-annual sampling event:

Well	Rationale
4928A	Pending access from LA County; access denied during first event
4909F	Pending replacement of well by Vulcan Materials; access denied during first event
PST-MW1P, PST MW2P	Pending location of wells or replacement; provide data near Pacific Steel facility
NH-C05-320	Collect sample to verify April 2012 results; pending removal of stuck submersible pump, also perform EBF vertical flow log
NH-C05-460	Last sampled January 2010; highest TCE detection in B-Zone
NH-C07-300	A-Zone Well last sampled October 2011; provide data between former Bendix facility and NHE wells
NH-C09-310	A-Zone well last sampled October 2011; provide data near Hewitt Pit
NH-C10-280	A-Zone well last sampled October 2011; provide data near Pacific Steel/Fleetwood Machine Products
NH-C11-295	A-Zone well last sampled December 2010; provide data near Hewitt Pit
NH-C17-235	A-Zone well last sampled October 2011; provide data downgradient of Victory-Vineland Landfill
3831Q	A-Zone well last sampled December 2010; recent maximum TCE concentrations greater than 10x MCL but decreasing
4918B	A-Zone well last sampled March 2007; provide data near Penrose Landfill

Otherwise, the scope of work associated with the second semiannual sampling event will proceed as described in the Phase 1 Pre-Design Work Plan (AMEC, 2012).

Please contact me at (510) 663-3996 should you have any questions regarding this matter.

Sincerely yours,
AMEC Environment & Infrastructure, Inc.

Mike Taraszki, PG, CHG, PMP
Project Manager

MT/DH/cpr
x:\16000s\162830\3000\phase i_pre-design investigation summary\01_text_cvr_letter\amec_13_162830_finalphase i design investigation_20130809.docx

cc: Robert Hartwell, PE
Ms. Carolyn Monteith (Lockheed Martin)
Mr. Benny Dehghi (Honeywell)
Mr. Vahe Dabbaghian (LADWP)
Ms. Poonam Acharya (DTSC)
Mr. Chi Diep and Susan Brownstein (CDPH)
Mr. Larry Moore (RWQCB-LA)
Mr. Richard Slade (ULARA Watermaster)
Mr. John Lindquist (CH2M Hill)

Attachments:

Table 1	Groundwater Elevations
Table 2a	Organic Analytical Results – A-Zone
Table 2b	Organic Analytical Results – B-Zone
Table 3a	Inorganic Analytical Results – A-Zone
Table 3b	Inorganic Analytical Results – B-Zone
Table 4	Comparison of Recent Analytical Results by Depth Region/Zone
Table 5	Vertical Flow Measurement Results
Table 6	Pneumatic Slug Test Results
Figure 1a	Trichloroethene Distribution in Groundwater – First Semiannual Sampling Event – A-Zone
Figure 1b	Trichloroethene Distribution in Groundwater – First Semiannual Sampling Event – B-Zone
Figure 2a	Tetrachloroethene Distribution in Groundwater – First Semiannual Sampling Event – A-Zone
Figure 2b	Tetrachloroethene Distribution in Groundwater – First Semiannual Sampling Event – B-Zone
Figure 3a	1,4-Dioxane Distribution in Groundwater – First Semiannual Sampling Event – A-Zone
Figure 3b	1,4-Dioxane Distribution in Groundwater – First Semiannual Sampling Event – B-Zone
Figure 4a	Chromium VI Distribution in Groundwater – First Semiannual Sampling Event – A-Zone
Figure 4b	Chromium VI Distribution in Groundwater – First Semiannual Sampling Event – B-Zone
Figure 5	NH-C05-460 Vertical Flow Profile
Figure 6	NH-C10-280 Vertical Flow Profile
Figure 7	NH-C10-360 Vertical Flow Profile
Figure 8	NH-C16-320 Vertical Flow Profile
Figure 9	NH-C16-390 Vertical Flow Profile
Figure 10	NH-C19-290 Vertical Flow Profile
Figure 11	NH-C19-360 Vertical Flow Profile
Figure 12	NH-C23-310 Vertical Flow Profile
Figure 13	NH-C23-400 Vertical Flow Profile
Figure 14	Pneumatic Slug Test Results
Attachment A	Inorganic Groundwater Parameters
Attachment B	Pneumatic Slug Test Curves
Attachment C	Data Validation Narrative

TABLES

TABLE 1

GROUND WATER ELEVATIONS

Phase I Pre-Design Investigation, NHOU Second Interim Remedy

Los Angeles County, California

Station Name	Date	Casing Elevations (feet, NAVD88)	Depth to Water (feet) /a/	Water Level Elevation (feet NAVD88)	Comments
4909C	17-Dec-12	757.02	249.02	508	
	7-Mar-13	757.02	250.22	506.8	
4918A	17-Dec-12	807.48	295.75	511.73	
	7-Mar-13	807.48	296.14	511.34	
4919D	17-Dec-12	769.96	261.44	508.52	
	7-Mar-13	769.96	261.98	507.98	
LC1-CW01	18-Dec-12	739.96	236.67	503.29	
	7-Mar-13	739.96	236.45	503.51	
LC1-CW02	18-Dec-12	740.15	237.98	502.17	
	7-Mar-13	740.15	237.49	502.66	
LC1-CW03	18-Dec-12	740.46	238.43	502.03	
	7-Mar-13	740.46	237.95	502.51	
NH-C01-325	18-Dec-12	783.66	274.6	509.06	
	7-Mar-13	783.66	274.73	508.93	
NH-C01-450	18-Dec-12	783.63	274.19	509.44	
	7-Mar-13	783.63	274.64	508.99	
NH-C01-660	18-Dec-12	783.73	274.1	509.63	
	7-Mar-13	783.73	275.39	508.34	
NH-C01-780	18-Dec-12	783.74	274.11	509.63	
	7-Mar-13	783.74	275.71	508.03	
NH-C02-220	17-Dec-12	660.32	170.11	490.21	
	7-Mar-13	660.32	NM		Paved over
NH-C02-325	17-Dec-12	659.42	169.07	490.35	
	7-Mar-13	659.42	NM		Paved over
NH-C02-520	17-Dec-12	659.89	165.82	494.07	
	7-Mar-13	659.89	NM		Paved over
NH-C02-681	17-Dec-12	659.87	160.71	499.16	
	7-Mar-13	659.87	NM		Paved over
NH-C03-380	17-Dec-12	711.34	206.7	504.64	
	7-Mar-13	711.34	207.06	504.28	
NH-C03-580	17-Dec-12	710.8	207.86	502.94	
	7-Mar-13	710.8	208.03	502.77	
NH-C03-680	17-Dec-12	711.52	205.94	505.58	
	7-Mar-13	711.52	207	504.52	
NH-C03-800	17-Dec-12	710.75	204.65	506.1	
	7-Mar-13	710.75	206.55	504.2	
NH-C05-320	17-Dec-12	775.03	266.67	508.36	
	7-Mar-13	775.03	265.8	509.23	
NH-C05-460	17-Dec-12	774.85	266.65	508.2	
	7-Mar-13	774.85	266.38	508.47	

TABLE 1

GROUND WATER ELEVATIONS

Phase I Pre-Design Investigation, NHOU Second Interim Remedy

Los Angeles County, California

Station Name	Date	Casing Elevations (feet, NAVD88)	Depth to Water (feet) /a/	Water Level Elevation (feet NAVD88)	Comments
NH-C08-295	17-Dec-12	737.88	232.96	504.92	
	7-Mar-13	737.88	232.62	505.26	
NH-C09-310	17-Dec-12	736.83	230.55	506.28	
	7-Mar-13	736.83	231.43	505.4	
NH-C10-280	17-Dec-12	710.04	206.94	503.1	
	7-Mar-13	710.04	206.71	503.33	
NH-C10-360	17-Dec-12	710.15	206.87	503.28	
	7-Mar-13	710.15	206.86	503.29	
NH-C11-295	18-Dec-12	730.87	221.62	509.25	
	7-Mar-13	730.87	223.42	507.45	
NH-C12-280	17-Dec-12	705.35	208.75	496.6	
	7-Mar-13	705.35	207.01	498.34	
NH-C12-360	17-Dec-12	705.31	208.23	497.08	
	7-Mar-13	705.31	206.72	498.59	
NH-C13-385	17-Dec-12	760.47	251.78	508.69	
	7-Mar-13	760.47	252.73	507.74	
NH-C14-250	17-Dec-12	694.2	195.19	499.01	
	7-Mar-13	694.2	194.13	500.07	
NH-C15-240	17-Dec-12	679.04	181.28	497.76	
	7-Mar-13	679.04	179.66	499.38	
NH-C15-330	17-Dec-12	679.11	180.91	498.2	
	7-Mar-13	679.11	179.56	499.55	
NH-C16-320	17-Dec-12	777.29	268.2	509.09	
	7-Mar-13	777.29	268.2	509.09	
NH-C16-390	17-Dec-12	777.33	268.28	509.05	
	7-Mar-13	777.33	268.39	508.94	
NH-C17-255	17-Dec-12	675.61	183.18	492.43	
	7-Mar-13	675.61	181.98	493.63	
NH-C17-339	17-Dec-12	675.77	182.49	493.28	
	7-Mar-13	675.77	181.54	494.23	
NH-C18-270	17-Dec-12	717.87	212.97	504.9	
	7-Mar-13	717.87	211.71	506.16	
NH-C18-365	17-Dec-12	717.96	213.18	504.78	
	7-Mar-13	717.96	212.68	505.28	
NH-C19-290	17-Dec-12	732.23	226.03	506.2	
	7-Mar-13	732.23	225.79	506.44	
NH-C19-360	17-Dec-12	732.08	225.55	506.53	
	7-Mar-13	732.08	226.22	505.86	
NH-C20-380	18-Dec-12	749.34	241.44	507.9	
	7-Mar-13	749.34	242.33	507.01	

TABLE 1

GROUND WATER ELEVATIONS

Phase I Pre-Design Investigation, NHOU Second Interim Remedy

Los Angeles County, California

Station Name	Date	Casing Elevations (feet, NAVD88)	Depth to Water (feet) /a/	Water Level Elevation (feet NAVD88)	Comments
NH-C21-260	18-Dec-12	704.85	201.09	503.76	
	7-Mar-13	704.85	200.66	504.19	
NH-C21-340	18-Dec-12	705.06	201.04	504.02	
	7-Mar-13	705.06	201.3	503.76	
NH-C22-360	18-Dec-12	802.34	292.09	510.25	
	7-Mar-13	802.34	291.56	510.78	
NH-C22-460	17-Dec-12	802.62	292.34	510.28	
	7-Mar-13	802.62	291.99	510.63	
NH-C22-600	17-Dec-12	802.5	292.16	510.34	
	7-Mar-13	802.5	292.21	510.29	
NH-C23-310	17-Dec-12	745.5	238.76	506.74	
	7-Mar-13	745.5	238.66	506.84	
NH-C23-400	17-Dec-12	745.49	238.52	506.97	
	7-Mar-13	745.49	238.84	506.65	
NH-C24-305	17-Dec-12	731.44	228.05	503.39	
	7-Mar-13	731.44	227.56	503.88	
NH-C24-410	17-Dec-12	731.48	228.03	503.45	
	7-Mar-13	731.48	227.64	503.84	
NH-C25-290	18-Dec-12	725.7	228.1	497.6	
	7-Mar-13	725.7	227.35	498.35	
NH-VPB-02	18-Dec-12	712.28	206.98	505.3	
	7-Mar-13	712.28	207.09	505.19	
NH-VPB-03	17-Dec-12	677.84	177.09	500.75	
	7-Mar-13	677.84	176.01	501.83	
NH-VPB-04	17-Dec-12	634.12	NM		Parked over
	7-Mar-13	634.12	NM		Parked over, unable to access
NH-VPB-05	17-Dec-12	657.94	169.74	488.2	
	7-Mar-13	657.94	168.44	489.5	
NH-VPB-06	18-Dec-12	749.41	241.72	507.69	
	7-Mar-13	749.41	242.46	506.95	
NH-VPB-07	17-Dec-12	757.99	251.34	506.65	
	7-Mar-13	757.99	251.03	506.96	
NH-VPB-08	18-Dec-12	670.49	174.79	495.7	
	7-Mar-13	670.49	173.48	497.01	
NH-VPB-09	17-Dec-12	796.85	257.89	538.96	
	7-Mar-13	796.85	259.48	537.37	
NH-VPB-10	18-Dec-12	765.92	235.93	529.99	
	7-Mar-13	765.92	236.2	529.72	
NH-VPB-11	18-Dec-12	792.42	282.68	509.74	
	7-Mar-13	792.42	283.62	508.8	

Notes:

/a/ Depth to water is measured from top of well casing

Cluster monitoring wells with the same station names (e.g., **NH-C05**-XXX) are collocated

TABLE 2A

ORGANIC ANALYTICAL RESULTS - A ZONE
Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

	Test Method	EPA 521			EPA 522	EPA 524.2								
	Analyte/ Units:	N-Nitrosodiethylamine (ng/l)	N-Nitrosodimethylamine (ng/l)	N-Nitrosomorpholine (ng/l)	1,4-Dioxane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	1,1-Dichloroethene (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,2-Dichloroethane (µg/L)	1,2-Dichloropropane (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Acetone (µg/L)	Bromodichloro-methane (µg/L)
Sample	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
4909C_293	01/07/13	**1.4 J/J**	ND(2.0) U/J	**0.75 J/J**	ND(0.27) U	ND(0.50) U	**3.7**	**1.8**	**0.038 J/J**	ND(0.50) U	**0.15 J/J**	ND(0.50) U	ND(10.0) R	ND(0.50) U
4918A_297.5	12/20/12	**1.8 J/J**	ND(2.0) U	**2.4**	**16.0**	**0.95**	**1.7**	**13.0**	ND(0.50) U	**0.21 J/J**	ND(0.50) U	ND(0.50) U	**1.7 J/J**	ND(0.50) U
4919D_295	12/06/12	ND(2.0) U	ND(2.0) U/J	**2.8**	**0.67**	ND(0.50) U	**0.047 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(10.0) R	ND(0.50) U
NH-C10-360_313	12/14/12	ND(2.0) U	ND(2.0) U	**1.1 J/J**	**1.6**	ND(0.50) U	**1.1**	ND(0.50) U	ND(0.50) U	**0.41 J/J**	**0.16 J/J**	ND(0.50) U	ND(10.0) U/J	ND(0.50) U
NH-C12-360_313	12/26/12	ND(2.0) U	ND(2.0) U	**1.7 J/J**	**1.2**	ND(0.50) U	**0.78**	**0.084 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(10.0) R	ND(0.50) U
NH-C13-385_338	12/12/12	ND(2.0)	ND(2.0)	**0.60 J/J**	ND(0.14) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(10.0) R	ND(0.50) U
NH-C14-250_203	12/26/12	ND(2.0) U	ND(2.0) U	**1.9 J/J**	ND(0.44) U	ND(0.50) U	**0.18 J/J**	**0.39 J/J**	ND(0.50) U	**2.6**	**0.23 J/J**	ND(0.50) U	ND(10.0) R	**1.1**
NH-C16-390_343	12/04/12	ND(2.0) U	ND(2.0) U	**2.1**	**3.4**	**0.31 J/J**	**0.36 J/J**	**1.8**	ND(0.50) U	**0.15 J/J**	ND(0.50) U	ND(0.50) U	**1.7 J/J**	ND(0.50) U
NH-C17-339_281	01/02/13	ND(2.0) U	**0.41 J/J**	**0.90 J/J**	**1.2**	ND(0.50) U	**0.92**	**0.18 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(10.0) R	ND(0.50) U
NH-C18-270_223	12/11/12	ND(2.0) U	ND(2.0) U	**0.56 J/J**	ND(0.24) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(10.0) R	ND(0.50) U
NH-C18-365_308	12/07/12	ND(2.0) U	ND(2.0) U	**3.2**	**1.6**	ND(0.50) U	**0.50 J/J**	**0.41 J/J**	ND(0.50) U	**0.18 J/J**	**0.13 J/J**	ND(0.50) U	ND(10.0) R	**0.28 J/J**
NH-C19-290_233	12/21/12	ND(2.0) U	ND(2.0) U	**24.0**	ND(0.76) U	ND(0.50) U	**0.14 J/J**	**0.35 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(10.0) R	**0.19 J/J**
NH-C19-290_233	01/11/13	NT	NT	NT	NT	ND(0.50) U	**0.15 J/J**	**0.71**	**0.03 J/J**	**0.56**	ND(0.50) U	ND(0.50) U	**1.5 J/J**	**0.22 J/J**
NH-C19-290_233_DUP-5	01/11/13	NT	NT	NT	NT	**0.046 J/J**	**0.12 J/J**	**0.63**	ND(0.50) U	**0.50 J/J**	ND(0.50) U	ND(0.50) U	**1.8 J/J**	**0.21 J/J**
NH-C19-290_243	01/11/13	NT	NT	NT	NT	**0.046 J/J**	**0.11 J/J**	**0.63**	ND(0.50) U	**0.67**	ND(0.50) U	ND(0.50) U	**2.5 J/J**	**0.26 J/J**
NH-C19-290_253	01/11/13	NT	NT	NT	NT	ND(0.50) U	**0.13 J/J**	**0.72**	ND(0.50) U	**0.80**	ND(0.50) U	ND(0.50) U	**1.5 J/J**	**0.21 J/J**
NH-C19-290_263	01/11/13	NT	NT	NT	NT	**0.063 J/J**	**0.15 J/J**	**0.65**	ND(0.50) U	**0.91**	ND(0.50) U	ND(0.50) U	**1.9 J/J**	**0.24 J/J**
NH-C19-290_273	01/11/13	NT	NT	NT	NT	**0.045 J/J**	**0.14 J/J**	**0.66**	ND(0.50) U	**0.46 J/J**	**0.089 J/J**	ND(0.50) U	**2.7 J/J**	**0.22 J/J**
NH-C19-290_283	01/11/13	NT	NT	NT	NT	**0.051 J/J**	**0.19 J/J**	**0.76**	ND(0.50) U	**0.45 J/J**	ND(0.50) U	ND(0.50) U	**1.6 J/J**	**0.17 J/J**
NH-C19-360_303	12/21/12	ND(2.0) U	ND(2.0) U	**23.0**	**1.8**	**0.06 J/J**	**0.27 J/J**	**0.41 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(10.0) R	ND(0.50) U
NH-C19-360_303	01/11/13	NT	NT	NT	NT	**0.18 J/J**	**0.30 J/J**	**1.2**	ND(0.50) U	**0.30 J/J**	**0.11 J/J**	ND(0.50) U	**1.7 R/J**	ND(0.50) U
NH-C19-360_313	01/11/13	NT	NT	NT	NT	**0.15 J/J**	**0.29 J/J**	**1.0**	ND(0.50) U	**0.19 J/J**	**0.10 J/J**	ND(0.50) U	**2.4 R/J**	ND(0.50) U
NH-C19-360_323	01/11/13	NT	NT	NT	NT	**0.10 J/J**	**0.30 J/J**	**0.76**	**0.036 J/J**	**0.24 J/J**	ND(0.50) U	**0.034 J/J**	**1.9 R/J**	ND(0.50) U
NH-C19-360_333	01/11/13	NT	NT	NT	NT	**0.096 J/J**	**0.32 J/J**	**0.74**	ND(0.50) U	**0.35 J/J**	ND(0.50) U	ND(0.50) U	**2.5 R/J**	ND(0.50) U
NH-C20-380_322	12/19/12	ND(2.0) U	ND(2.0) U/J	ND(2.4) U	**1.6**	ND(0.50) U	**0.18 J/J**	**0.15 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(10.0) R	ND(0.50) U
NH-C21-260_213	01/03/13	ND(2.0) U	ND(2.0) U	**4.1**	**0.79**	ND(0.50) U	ND(0.50) U	**0.25 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(10.0) R	**0.13 J/J**
NH-C21-260_213_DUP-3	01/03/13	ND(2.0) U	ND(2.0) U/J	**2.7**	**0.86**	ND(0.50) U	ND(0.50) U	**0.26 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(10.0) R	**0.13 J/J**
NH-C21-340_283	01/04/13	ND(2.0) U	ND(2.0) U	**2.7**	**2.1**	ND(0.50) U	**0.61**	**0.30 J/J**	**0.045 J/J**	**0.18 J/J**	ND(0.50) U	ND(0.50) U	ND(10.0) R	ND(0.50) U
NH-C23-310_253	12/28/12	ND(2.0) U	ND(2.0) U	**2.4**	**2.7**	ND(0.50) U	**0.30 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(10.0) R	ND(0.50) U
NH-C23-310_253	01/11/13	NT	NT	NT	NT	ND(0.50) U	**0.27 J/J**	**0.052 J/J**	ND(0.50) U	**0.44 J/J**	ND(0.50) U	ND(0.50) U	**2.2 R/J**	ND(0.50) U
NH-C23-310_263	01/11/13	NT	NT	NT	NT	**0.073 J/J**	**0.31 J/J**	**0.077 J/J**	ND(0.50) U	**0.14 J/J**	ND(0.50) U	ND(0.50) U	**1.5 R/J**	ND(0.50) U
NH-C23-310_273	01/11/13	NT	NT	NT	NT	**0.078 J/J**	**0.29 J/J**	**0.084 J/J**	ND(0.50) U	**0.10 J/J**	ND(0.50) U	ND(0.50) U	**2.6 R/J**	ND(0.50) U
NH-C23-310_283	01/11/13	NT	NT	NT	NT	**0.064 J/J**	**0.37 J/J**	**0.089 J/J**	ND(0.50) U	**0.15 J/J**	ND(0.50) U	ND(0.50) U	**1.6 R/J**	ND(0.50) U
NH-C23-310_293	01/11/13	NT	NT	NT	NT	ND(0.50) U	**0.33 J/J**	ND(0.50) U	ND(0.50) U	**0.14 J/J**	ND(0.50) U	ND(0.50) U	**1.7 R/J**	ND(0.50) U
NH-C23-310_303	01/11/13	NT	NT	NT	NT	**0.14 J/J**	**0.30 J/J**	**0.12 J/J**	ND(0.50) U	**0.13 J/J**	ND(0.50) U	ND(0.50) U	ND(10.0) R	**0.087 J/J**
NH-C24-305_247	12/18/12	ND(2.0)	ND(2.0)	ND(2.0) U/J	**0.89**	ND(0.50) U	**0.27 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(10.0) R	ND(0.50) U
NHE-1_240	12/11/12	ND(2.0) U	ND(2.0) U/J	**77.0**	**3.2**	**0.21 J/J**	**0.90**	**0.30 J/J**	ND(0.50) U	**0.23 J/J**	ND(0.50) U	ND(0.50) U	**3.3 R/J**	ND(0.50) U

TABLE 2A

ORGANIC ANALYTICAL RESULTS - A ZONE
Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

	Test Method	EPA 524.2														
	Analyte/ Units:	Carbon tetrachloride (µg/L)	Chlorobenzene (µg/L)	Chloroethane (µg/L)	Chloroform (µg/L)	Chloromethane (µg/L)	cis-1,2-Dichloroethene (µg/L)	Dibromochloro-methane (µg/L)	Dichlorodifluoro-methane (µg/L)	Diethyl Ether (µg/L)	Ethanol (µg/L)	Ethylbenzene (µg/L)	Methylene chloride (µg/L)	o-Xylene (µg/L)	tert-Butyl methyl ether (µg/L)	Tetrachloroethene (µg/L)
Sample	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
4909C_293	01/07/13	ND(0.50) U	ND(0.50) U	**0.096 J/J**	**0.074 J/J**	ND(0.50) U/J	**1.3**	ND(0.50) U	**5.3**	**0.13 J/J**	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**14.0**
4918A_297.5	12/20/12	ND(0.50) U	**0.36 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	**3.9**	ND(0.50) U	**0.29 J/J**	**0.26 J/J**	ND(50.0) R	ND(0.50) U	ND(0.50) U	**0.081 J/J**	ND(0.50) U	ND(0.50) U
4919D_295	12/06/12	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.67**	ND(0.50) U/B,J	**0.27 J/J**	ND(0.50) U	**0.13 J/J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.39 J/J**	**0.55**
NH-C10-360_313	12/14/12	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.18 J/J**	ND(0.50) U/B,J	**8.3**	ND(0.50) U	**3.2 J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**3.3**
NH-C12-360_313	12/26/12	**0.18 J/J**	ND(0.50) U	ND(0.50) U	**0.14 J/J**	ND(0.50) U/J	**0.29 J/J**	ND(0.50) U	**0.71**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.0**
NH-C13-385_338	12/12/12	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.13 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	**0.044 J/J**	ND(0.50) U	**0.25 J/J**
NH-C14-250_203	12/26/12	**0.38 J/J**	ND(0.50) U	ND(0.50) U	**2.6**	ND(0.50) U/J	**0.72**	**0.19 J/J**	**0.48 J/J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**16.0**
NH-C16-390_343	12/04/12	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.29 J/J**	ND(0.50) U	**2.8**	ND(0.50) U	**1.0**	ND(0.50) U	ND(50.0) R	**0.048 J/J**	ND(0.50) U	**0.075 J/J**	ND(0.50) U	**1.5**
NH-C17-339_281	01/02/13	**0.14 J/J**	ND(0.50) U	ND(0.50) U	**0.20 J/J**	ND(0.50) U	**0.60**	ND(0.50) U	**2.6**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.7**
NH-C18-270_223	12/11/12	ND(0.50) U	ND(0.50) U	ND(0.50) U	**18.0**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C18-365_308	12/07/12	**0.16 J/J**	ND(0.50) U	ND(0.50) U	**8.6**	**0.13 J/J**	**2.6**	ND(0.50) U	**6.2**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.5**
NH-C19-290_233	12/21/12	**0.18 J/J**	ND(0.50) U	ND(0.50) U	**2.3**	ND(0.50) U/B,J	**0.39 J/J**	ND(0.50) U	**3.0**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.0**
NH-C19-290_233	01/11/13	**0.30 J/J**	ND(0.50) U	ND(0.50) U	**2.3**	**0.065 J/J**	**0.47 J/J**	ND(0.50) U	**2.4**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.1**
NH-C19-290_233_DUP-5	01/11/13	**0.24 J/J**	ND(0.50) U	ND(0.50) U	**2.4**	**0.063 J/J**	**0.56**	ND(0.50) U	**2.5**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.1**
NH-C19-290_243	01/11/13	**0.20 J/J**	ND(0.50) U	ND(0.50) U	**2.3**	**0.074 J/J**	**0.48 J/J**	ND(0.50) U	**2.7**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.6**
NH-C19-290_253	01/11/13	**0.23 J/J**	ND(0.50) U	ND(0.50) U	**2.4**	**0.074 J/J**	**0.51**	ND(0.50) U	**2.6**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.9**
NH-C19-290_263	01/11/13	**0.26 J/J**	ND(0.50) U	ND(0.50) U	**2.5**	**0.061 J/J**	**0.48 J/J**	ND(0.50) U	**2.6**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.7**
NH-C19-290_273	01/11/13	**0.24 J/J**	ND(0.50) U	ND(0.50) U	**2.3**	**0.064 J/J**	**0.48 J/J**	ND(0.50) U	**2.7**	ND(0.50) U	**23.0 J/J**	ND(0.50) U	**0.13 J/J**	ND(0.50) U	ND(0.50) U	**2.1**
NH-C19-290_283	01/11/13	**0.30 J/J**	ND(0.50) U	ND(0.50) U	**2.0**	ND(0.50) U	**0.51**	ND(0.50) U	**2.9**	ND(0.50) U	ND(50.0) R	ND(0.50) U	**0.12 J/J**	ND(0.50) U	ND(0.50) U	**2.0**
NH-C19-360_303	12/21/12	**0.32 J/J**	ND(0.50) U	ND(0.50) U	**1.0**	ND(0.50) U/B,J	**1.1**	ND(0.50) U	**4.9**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.7**
NH-C19-360_303	01/11/13	**0.44 J/J**	ND(0.50) U	ND(0.50) U	**1.1**	ND(0.50) U/B,J	**1.3**	ND(0.50) U	**4.8**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.0**
NH-C19-360_313	01/11/13	**0.42 J/J**	ND(0.50) U	ND(0.50) U	**0.88**	ND(0.50) U/B,J	**1.7**	ND(0.50) U	**3.7**	ND(0.50) U	ND(50.0) R	ND(0.50) U	**0.16 J/J**	ND(0.50) U	ND(0.50) U	**2.5**
NH-C19-360_323	01/11/13	**0.25 J/J**	ND(0.50) U	ND(0.50) U	**0.70**	ND(0.50) U/B,J	**2.2**	ND(0.50) U	**2.6**	ND(0.50) U	ND(50.0) R	ND(0.50) U	**0.19 J/J**	ND(0.50) U	ND(0.50) U	**3.3**
NH-C19-360_333	01/11/13	**0.30 J/J**	ND(0.50) U	ND(0.50) U	**0.67**	ND(0.50) U/B,J	**2.3**	ND(0.50) U	**2.6**	ND(0.50) U	ND(50.0) R	ND(0.50) U	**0.14 J/J**	ND(0.50) U	ND(0.50) U	**2.6**
NH-C20-380_322	12/19/12	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.35 J/J**	ND(0.50) U	**1.2**	ND(0.50) U	**0.43 J/J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.3**
NH-C21-260_213	01/03/13	ND(0.50) U	ND(0.50) U	ND(0.50) U	**14.0**	ND(0.50) U	**0.087 J/J**	ND(0.50) U	**0.88**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	**0.043 J/J**	ND(0.50) U	**0.76**
NH-C21-260_213_DUP-3	01/03/13	ND(0.50) U	ND(0.50) U	ND(0.50) U	**14.0**	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.0**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.70**
NH-C21-340_283	01/04/13	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.79**	ND(0.50) U	**3.6**	ND(0.50) U	**1.5**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	**0.076 J/J**	ND(0.50) U	**0.51**
NH-C23-310_253	12/28/12	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.5**	ND(0.50) U	**1.8**	ND(0.50) U	**0.43 J/J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.7**
NH-C23-310_253	01/11/13	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.0**	**0.073 J/J**	**1.8**	ND(0.50) U	**0.30 J/J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	**0.22 J/J**	ND(0.50) U	ND(0.50) U	**1.2**
NH-C23-310_263	01/11/13	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.3**	ND(0.50) U	**2.2**	ND(0.50) U	**0.40 J/J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.1**
NH-C23-310_273	01/11/13	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.2**	**0.05 J/J**	**2.1**	ND(0.50) U	**0.33 J/J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	**0.21 J/J**	ND(0.50) U	ND(0.50) U	**2.4**
NH-C23-310_283	01/11/13	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.3**	ND(0.50) U	**2.3**	ND(0.50) U	**0.36 J/J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.5**
NH-C23-310_293	01/11/13	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.1**	**0.056 J/J**	**2.2**	ND(0.50) U	**0.49 J/J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.4**
NH-C23-310_303	01/11/13	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.3**	ND(0.50) U	**1.7**	ND(0.50) U	**0.28 J/J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.3**
NH-C24-305_247	12/18/12	**0.22 J/J**	ND(0.50) U	ND(0.50) U	**0.33 J/J**	ND(0.50) U/J	**0.23 J/J**	ND(0.50) U	**1.4 J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.6**
NHE-1_240	12/11/12	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.72**	ND(0.50) U/J	**0.53**	ND(0.50) U	**0.36 J/J**	ND(0.50) U	ND(50.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.6**

TABLE 2A

ORGANIC ANALYTICAL RESULTS - A ZONE
Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

	Test Method	EPA 524.2					
	Analyte/ Units:	Tetrahydrofuran (µg/L)	Toluene (µg/L)	trans-1,2-Dichloroethene (µg/L)	Trichloroethene (µg/L)	Trichlorofluoro-methane (µg/L)	Vinyl chloride (µg/L)
Sample	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
4909C_293	01/07/13	ND(5.0) U/J	ND(0.50) U/B,J	ND(0.50) U	**50.0**	**0.17 J/J**	ND(0.50) U
4918A_297.5	12/20/12	**2.4 J/J**	ND(0.50) U/B,J	ND(0.50) U	**1.9**	**0.15 J/J**	**0.11 J/J**
4919D_295	12/06/12	ND(5.0) U	**0.13 J/J**	ND(0.50) U	**15.0**	**0.074 J/J**	ND(0.50) U
NH-C10-360_313	12/14/12	ND(5.0) U	ND(0.50) U/J	**0.39 J/J**	**3.2**	**0.12 J/J**	ND(0.50) U
NH-C12-360_313	12/26/12	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**0.50 J/J**	ND(0.50) U	ND(0.50) U
NH-C13-385_338	12/12/12	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**7.7**	ND(0.50) U	ND(0.50) U
NH-C14-250_203	12/26/12	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**6.1**	ND(0.50) U	ND(0.50) U
NH-C16-390_343	12/04/12	ND(5.0) U	**0.16 J/J**	ND(0.50) U	**19.0**	**0.89**	ND(0.50) U
NH-C17-339_281	01/02/13	ND(5.0) U	**0.069 J/J**	ND(0.50) U	**0.91**	**0.25 J/J**	ND(0.50) U
NH-C18-270_223	12/11/12	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**0.59**	ND(0.50) U	ND(0.50) U
NH-C18-365_308	12/07/12	ND(5.0) U	ND(0.50) U/J	**0.13 J/J**	**70.0**	**0.39 J/J**	ND(0.50) U
NH-C19-290_233	12/21/12	ND(5.0) U	**0.078 J/J**	ND(0.50) U	**60.0**	**0.19 J/J**	ND(0.50) U
NH-C19-290_233	01/11/13	**2.1 J/J**	ND(0.50) U	ND(0.50) U	**78.0**	**0.25 J/J**	ND(0.50) U
NH-C19-290_233_DUP-5	01/11/13	**2.3 J/J**	ND(0.50) U	ND(0.50) U	**79.0**	**0.27 J/J**	ND(0.50) U
NH-C19-290_243	01/11/13	**2.3 J/J**	ND(0.50) U	ND(0.50) U	**76.0**	**0.27 J/J**	ND(0.50) U
NH-C19-290_253	01/11/13	**2.4 J/J**	ND(0.50) U	ND(0.50) U	**77.0 J**	**0.26 J/J**	ND(0.50) U
NH-C19-290_263	01/11/13	**2.1 J/J**	ND(0.50) U	ND(0.50) U	**77.0**	**0.27 J/J**	ND(0.50) U
NH-C19-290_273	01/11/13	**2.1 J/J**	ND(0.50) U	ND(0.50) U	**79.0**	**0.26 J/J**	ND(0.50) U
NH-C19-290_283	01/11/13	**2.3 J/J**	ND(0.50) U	ND(0.50) U	**82.0**	**0.26 J/J**	ND(0.50) U
NH-C19-360_303	12/21/12	ND(5.0) U	**0.13 J/J**	ND(0.50) U	**42.0**	**0.28 J/J**	ND(0.50) U
NH-C19-360_303	01/11/13	**2.5 J/J**	ND(0.50) U	ND(0.50) U	**69.0 J**	**0.44 J/J**	ND(0.50) U
NH-C19-360_313	01/11/13	**2.6 J/J**	ND(0.50) U	ND(0.50) U	**55.0**	**0.28 J/J**	ND(0.50) U
NH-C19-360_323	01/11/13	**2.6 J/J**	ND(0.50) U	ND(0.50) U	**45.0**	**0.17 J/J**	ND(0.50) U
NH-C19-360_333	01/11/13	**2.4 J/J**	ND(0.50) U	ND(0.50) U	**45.0**	**0.21 J/J**	ND(0.50) U
NH-C20-380_322	12/19/12	ND(5.0) U	ND(0.50) U/B,J	ND(0.50) U	**46.0**	**0.12 J/J**	ND(0.50) U
NH-C21-260_213	01/03/13	ND(5.0) U	**0.078 J/J**	ND(0.50) U	**23.0**	ND(0.50) U	ND(0.50) U
NH-C21-260_213_DUP-3	01/03/13	ND(5.0) U	**0.086 J/J**	ND(0.50) U	**24.0**	**0.08 J/J**	ND(0.50) U
NH-C21-340_283	01/04/13	ND(5.0) U	ND(0.50) U/B,J	ND(0.50) U	**15.0**	ND(0.50) U	ND(0.50) U
NH-C23-310_253	12/28/12	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**1.9**	ND(0.50) U	ND(0.50) U
NH-C23-310_253	01/11/13	**2.3 J/J**	ND(0.50) U	ND(0.50) U	**1.7**	ND(0.50) U	ND(0.50) U
NH-C23-310_263	01/11/13	**2.4 J/J**	ND(0.50) U	ND(0.50) U	**2.4**	ND(0.50) U	ND(0.50) U
NH-C23-310_273	01/11/13	**2.5 J/J**	ND(0.50) U	ND(0.50) U	**2.2**	ND(0.50) U	ND(0.50) U
NH-C23-310_283	01/11/13	**2.2 J/J**	ND(0.50) U	ND(0.50) U	**2.2**	ND(0.50) U	ND(0.50) U
NH-C23-310_293	01/11/13	**2.4 J/J**	ND(0.50) U	ND(0.50) U	**2.5**	ND(0.50) U	ND(0.50) U
NH-C23-310_303	01/11/13	**2.3 J/J**	ND(0.50) U	ND(0.50) U	**2.0**	ND(0.50) U	ND(0.50) U
NH-C24-305_247	12/18/12	ND(5.0) U	ND(0.50) U/B,J	ND(0.50) U	**0.24 J/J**	**0.10 J/J**	ND(0.50) U
NHE-1_240	12/11/12	ND(5.0) U	**0.72**	ND(0.50) U	**38.0**	**0.38 J/J**	ND(0.50) U

TABLE 2A

ORGANIC ANALYTICAL RESULTS - A ZONE
Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

Abbreviations
EPA = The United States Environmental Protection Agency
ng/L = Nanogram per liter
ND = Not Detected at the specific reporting level in parentheses
NT = Not Tested
µg/L = Microgram per liter

Validation Qualifiers
A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias.
J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
R The sample results are rejected. The presence or absence of the analyte cannot be verified. Rejected results are not usable for any purpose.
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ = The analyte was analyzed for but was not detected above the reported value. The reported quantitation limit is approximate.

Laboratory Qualifiers
B = Compound is also detected in the laboratory method blank.
J = Result is detected below the reporting limit or is an estimated concentration.

TABLE 2B

ORGANIC ANALYTICAL RESULTS - B ZONE

Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy

Los Angeles County, California

	Test Method	EPA 521			EPA 522	EPA 524.2					
	Analyte/ Units:	N-Nitrosodiethylamine (ng/l)	N-Nitrosodi-n-butylamine (ng/l)	N-Nitrosomorpholine (ng/l)	1,4-Dioxane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	1,1-Dichloroethene (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,2-Dichlorobenzene (µg/L)	1,2-Dichloroethane (µg/L)
Sample	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
4909C_392	01/07/13	ND(2.0) U	ND(2.0) U	**0.72 J/J**	ND(0.13) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
4909C_398	01/07/13	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(0.14) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
4918A_483	12/20/12	**1.1 J/J**	ND(2.0) U/J	**2.4**	**8.7**	**2.8**	**1.5**	**24.0**	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-18B_402	12/05/12	ND(2.0) U	ND(2.0) U	**0.67 J/J**	ND(0.38) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-18B_405	12/06/12	ND(2.0) U	ND(2.0) U	ND(2.0) J	**0.41**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-18B_405_DUP-1	12/06/12	ND(2.0) U	ND(2.0) U	**0.54 J/J**	**0.39**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-19B_401.5	12/13/12	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.082) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-19B_401.5_DUP-2	12/13/12	ND(2.0)	ND(2.0)	**0.51 J/J**	ND(0.07) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-19B_405.5	12/13/12	ND(2.0)	ND(2.0) U/J	**0.56 J/J**	ND(0.10) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
LA1-CW05_339	12/10/12	ND(2.0) U	ND(2.0) U	**25.0**	**1.8**	ND(0.50) U	ND(0.50) U	**0.11 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U
LA1-CW05_356	12/10/12	ND(2.0) U	ND(2.0) U	**23.0**	**1.9 J**	ND(0.50) U	ND(0.50) U	**0.10 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C01-450_403	12/27/12	ND(2.0) U	**0.99 J/J**	**4.4**	**1.8**	**2.6**	**0.34 J/J**	**13.0**	ND(0.50) U	ND(0.50) U	**0.11 J/J**
NH-C01-450_447	12/27/12	ND(2.0) U	ND(2.0) U	**2.8**	**1.9**	**1.4**	**0.34 J/J**	**6.5**	**0.041 J/J**	ND(0.50) U	ND(0.50) U
NH-C10-360_340	12/14/12	ND(2.0) U	ND(2.0) U	**1.0 J/J**	**1.5**	ND(0.50) U	**1.3**	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.34 J/J**
NH-C12-360_343	12/26/12	ND(2.0) U	ND(2.0) U	**2.9**	**0.86**	ND(0.50) U	**1.4**	**0.10 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C13-385_363	12/12/12	ND(2.0)	**0.59 J/J**	**1.1 J/J**	ND(0.16) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C16-390_375	12/04/12	ND(2.0) U	ND(2.0) U	**2.4**	**1.3**	**0.30 J/J**	**0.24 J/J**	**1.1**	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C17-339_313	01/02/13	ND(2.0) U	ND(2.0) U/J	**0.96 J/J**	**1.2**	ND(0.50) U	**0.77**	**0.17 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C18-365_348	12/07/12	ND(2.0) U	ND(2.0) UJ	ND(2.1) U	**3.3 J**	ND(0.50) U	**0.70**	**0.24 J/J**	ND(0.50) U	ND(0.50) U	**0.26 J/J**
NH-C19-360_343	01/11/13	NT	NT	NT	NT	**0.12 J/J**	**0.30 J/J**	**0.84**	ND(0.50) U	ND(0.50) U	**0.25 J/J**
NH-C19-360_343_DUP-6	01/11/13	NT	NT	NT	NT	**0.076 J/J**	**0.37 J/J**	**0.78**	ND(0.50) U	ND(0.50) U	**0.30 J/J**
NH-C19-360_349	12/21/12	ND(2.0) U	ND(2.0) U	**12.0**	**2.3**	ND(0.50) U	**0.31 J/J**	**0.41 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C19-360_353	01/11/13	NT	NT	NT	NT	**0.07 J/J**	**0.31 J/J**	**0.74**	ND(0.50) U	ND(0.50) U	**0.54**
NH-C20-380_361	12/19/12	ND(2.0) U	ND(2.0) U/J	ND(2.0) U/J	**1.3**	ND(0.50) U	**0.085 J/J**	**0.18 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C21-340_325	01/04/13	ND(2.0) U	ND(2.0) U	**2.0**	**2.0**	ND(0.50) U	**0.70**	**0.32 J/J**	**0.037 J/J**	ND(0.50) U	**0.18 J/J**
NH-C21-340_325_DUP-4	01/04/13	ND(2.0) U	ND(2.0) U	**1.9 J/J**	**2.1**	ND(0.50) U	**0.64**	**0.23 J/J**	**0.054 J/J**	ND(0.50) U	**0.19 J/J**
NH-C23-400_343	12/28/12	ND(2.0) U	ND(2.0) U	**1.8 J/J**	**2.2**	ND(0.50) U	**0.16 J/J**	**0.20 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C23-400_397	12/28/12	ND(2.0) U	ND(2.0) U	**1.9 J/J**	**1.4**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C23-400_343	01/11/13	NT	NT	NT	NT	ND(0.50) U	**0.13 J/J**	**0.17 J/J**	ND(0.50) U	ND(0.50) U	**2.4**
NH-C23-400_353	01/11/13	NT	NT	NT	NT	ND(0.50) U	**0.18 J/J**	**0.39 J/J**	ND(0.50) U	**0.04 J/J**	**0.23 J/J**
NH-C23-400_363	01/11/13	NT	NT	NT	NT	ND(0.50) U	**0.16 J/J**	**0.34 J/J**	ND(0.50) U	**0.035 J/J**	**0.14 J/J**
NH-C23-400_373	01/11/13	NT	NT	NT	NT	**0.045 J/J**	**0.099 J/J**	**0.38 J/J**	ND(0.50) U	ND(0.50) U	**0.23 J/J**
NH-C23-400_383	01/11/13	NT	NT	NT	NT	ND(0.50) U	**0.12 J/J**	**0.32 J/J**	ND(0.50) U	ND(0.50) U	**0.28 J/J**
NH-C23-400_393	01/11/13	NT	NT	NT	NT	ND(0.50) U	**0.096 J/J**	**0.33 J/J**	ND(0.50) U	ND(0.50) U	**0.33 J/J**

TABLE 2B

ORGANIC ANALYTICAL RESULTS - B ZONE

Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy

Los Angeles County, California

	Test Method	EPA 524.2										
	Analyte/ Units:	1,2-Dichloropropane (µg/L)	Acetone (µg/L)	Benzene (µg/L)	Carbon disulfide (µg/L)	Carbon tetrachloride (µg/L)	Chlorobenzene (µg/L)	Chloroform (µg/L)	Chloromethane (µg/L)	cis-1,2-Dichloroethene (µg/L)	Dichlorodifluoro-methane (µg/L)	Ethylbenzene (µg/L)
Sample	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
4909C_392	01/07/13	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
4909C_398	01/07/13	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.062 J/J**	ND(0.50) U
4918A_483	12/20/12	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.22 J/J**	**0.16 J/J**	ND(0.50) U	**2.5**	**0.39 J/J**	ND(0.50) U
GW-18B_402	12/05/12	ND(0.50) U	**1.4 R/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.15 J/J**	**0.062 J/J**	**0.058 J/J**	**0.15 J/J**	**0.034 J/J**
GW-18B_405	12/06/12	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.13 J/J**	ND(0.50) U/B,J	**0.072 J/J**	**0.13 J/J**	**0.039 J/J**
GW-18B_405_DUP-1	12/06/12	ND(0.50) U	**1.5 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.15 J/J**	ND(0.50) U/B,J	**0.036 J/J**	**0.11 J/J**	**0.034 J/J**
GW-19B_401.5	12/13/12	ND(0.50) U	**1.5 R/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/J	ND(0.50) U	**0.045 J/J**	ND(0.50) U
GW-19B_401.5_DUP-2	12/13/12	ND(0.50) U	**3.5 R/J**	**0.038 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	**0.038 J/J**
GW-19B_405.5	12/13/12	ND(0.50) U	**2.0 R/J**	**0.037 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/J	ND(0.50) U	**0.093 J/J**	**0.045 J/J**
LA1-CW05_339	12/10/12	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.21 J/J**	ND(0.50) U/J	ND(0.50) U	**0.061 J/J**	ND(0.50) U/J
LA1-CW05_356	12/10/12	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.22 J/J**	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C01-450_403	12/27/12	ND(0.50) U	**1.8 R/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.11 J/J**	**0.17 J/J**	ND(0.50) U/J	**0.85**	**1.0**	ND(0.50) U
NH-C01-450_447	12/27/12	ND(0.50) U	**2.8 R/J**	ND(0.50) U	**0.049 J/J**	ND(0.50) U	ND(0.50) U	**0.14 J/J**	ND(0.50) U/J	**0.81**	**0.48 J/J**	**0.04 J/J**
NH-C10-360_340	12/14/12	**0.18 J/J**	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.22 J/J**	ND(0.50) U/B,J	**7.6**	**3.5 J**	**0.032 J/J**
NH-C12-360_343	12/26/12	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.079 J/J**	ND(0.50) U/J	**0.55**	**1.5**	ND(0.50) U
NH-C13-385_363	12/12/12	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.13 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C16-390_375	12/04/12	ND(0.50) U	**1.9 J/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.31 J/J**	ND(0.50) U/J	**0.68**	**0.21 J/J**	**0.033 J/J**
NH-C17-339_313	01/02/13	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	**0.14 J/J**	ND(0.50) U	**0.14 J/J**	ND(0.50) U	**0.59**	**2.2**	ND(0.50) U
NH-C18-365_348	12/07/12	**0.092 J/J**	**1.6 R/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.4**	ND(0.50) U	**4.9**	**3.0**	ND(0.50) U/J
NH-C19-360_343	01/11/13	**0.083 J/J**	**2.1 R/J**	ND(0.50) U	ND(0.50) U	**0.25 J/J**	ND(0.50) U	**0.68**	ND(0.50) U/B,J	**2.2**	**2.5**	ND(0.50) U
NH-C19-360_343_DUP-6	01/11/13	**0.094 J/J**	**1.7 R/J**	ND(0.50) U	ND(0.50) U	**0.23 J/J**	ND(0.50) U	**0.71**	ND(0.50) U/B,J	**2.2**	**2.7**	ND(0.50) U
NH-C19-360_349	12/21/12	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	**0.34 J/J**	ND(0.50) U	**0.81**	ND(0.50) U/B,J	**2.0**	**3.5**	ND(0.50) U
NH-C19-360_353	01/11/13	ND(0.50) U	**2.0 R/J**	ND(0.50) U	ND(0.50) U	**0.23 J/J**	ND(0.50) U	**0.71**	ND(0.50) U/B,J	**2.2**	**2.6**	ND(0.50) U
NH-C20-380_361	12/19/12	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.36 J/J**	ND(0.50) U	**0.93**	**0.27 J/J**	ND(0.50) U
NH-C21-340_325	01/04/13	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.53**	ND(0.50) U	**3.9**	**2.0**	ND(0.50) U
NH-C21-340_325_DUP-4	01/04/13	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.50**	ND(0.50) U	**3.9**	**1.9**	ND(0.50) U
NH-C23-400_343	12/28/12	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.37 J/J**	ND(0.50) U	**1.6**	**0.32 J/J**	ND(0.50) U
NH-C23-400_397	12/28/12	ND(0.50) U	ND(10.0) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.32 J/J**	ND(0.50) U	**0.60**	**0.18 J/J**	ND(0.50) U
NH-C23-400_343	01/11/13	ND(0.50) U	**5.0 R/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.23 J/J**	ND(0.50) U/B,J	**0.91**	**0.18 J/J**	ND(0.50) U
NH-C23-400_353	01/11/13	ND(0.50) U	**4.9 R/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.34 J/J**	ND(0.50) U/B,J	**1.8**	**0.30 J/J**	ND(0.50) U
NH-C23-400_363	01/11/13	ND(0.50) U	**2.3 R/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.31 J/J**	ND(0.50) U/B,J	**1.6**	**0.24 J/J**	ND(0.50) U
NH-C23-400_373	01/11/13	ND(0.50) U	**4.9 R/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.29 J/J**	ND(0.50) U/B,J	**1.1**	**0.23 J/J**	ND(0.50) U
NH-C23-400_383	01/11/13	ND(0.50) U	**4.4 R/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.30 J/J**	**0.056 J/J**	**1.1**	**0.22 J/J**	ND(0.50) U
NH-C23-400_393	01/11/13	ND(0.50) U	**1.7 R/J**	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.25 J/J**	**0.051 J/J**	**1.0**	**0.21 J/J**	ND(0.50) U

TABLE 2B

ORGANIC ANALYTICAL RESULTS - B ZONE
Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

	Test Method	EPA 524.2									
	Analyte/ Units:	Iodomethane (µg/L)	Methylene chloride (µg/L)	o-Xylene (µg/L)	p-Isopropyltoluene (µg/L)	Tetrachloroethene (µg/L)	Tetrahydrofuran (µg/L)	Toluene (µg/L)	trans-1,2-Dichloroethene (µg/L)	Trichloroethene (µg/L)	Trichlorofluoro-methane (µg/L)
Sample	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
4909C_392	01/07/13	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.18 J/J**	ND(5.0) U	ND(0.50) U/B,J	ND(0.50) U	**2.7**	ND(0.50) U
4909C_398	01/07/13	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.37 J/J**	ND(5.0) U	ND(0.50) U/B,J	ND(0.50) U	**3.6**	ND(0.50) U
4918A_483	12/20/12	ND(2.0) U	ND(0.50) U	**0.089 J/J**	ND(0.50) U	ND(0.50) U	**1.1 J/J**	ND(0.50) U/B,J	ND(0.50) U	**2.6**	**0.69**
GW-18B_402	12/05/12	ND(2.0) U	ND(0.50) U	**0.044 J/J**	ND(0.50) U	**0.31 J/J**	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**8.4**	ND(0.50) U
GW-18B_405	12/06/12	ND(2.0) U	ND(0.50) U	**0.056 J/J**	ND(0.50) U	**0.25 J/J**	ND(5.0) U	**0.18 J/J**	ND(0.50) U	**7.3**	ND(0.50) U
GW-18B_405_DUP-1	12/06/12	ND(2.0) U	ND(0.50) U	**0.053 J/J**	ND(0.50) U	**0.29 J/J**	ND(5.0) U	**0.18 J/J**	ND(0.50) U	**7.4**	ND(0.50) U
GW-19B_401.5	12/13/12	ND(2.0) U	ND(0.50) U	**0.05 J/J**	ND(0.50) U	**0.22 J/J**	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**0.42 J/J**	ND(0.50) U
GW-19B_401.5_DUP-2	12/13/12	ND(2.0) U	ND(0.50) U	**0.058 J/J**	ND(0.50) U	**0.17 J/J**	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**0.37 J/J**	ND(0.50) U
GW-19B_405.5	12/13/12	**1.2 J/J**	ND(0.50) U	**0.071 J/J**	ND(0.50) U	**0.18 J/J**	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**0.39 J/J**	ND(0.50) U
LA1-CW05_339	12/10/12	ND(2.0) U	ND(0.50) U	ND(0.50) U/J	ND(0.50) U	**6.0**	ND(5.0) U	**0.12 J/J**	ND(0.50) U	**2.0**	ND(0.50) U
LA1-CW05_356	12/10/12	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**19.0**	ND(5.0) U	**0.079 J/J**	ND(0.50) U	**2.5**	ND(0.50) U
NH-C01-450_403	12/27/12	ND(2.0) U	ND(0.50) U	**0.049 J/J**	ND(0.50) U	**0.63**	**0.52 J/J**	ND(0.50) U/J	ND(0.50) U	**2.2**	**0.67**
NH-C01-450_447	12/27/12	ND(2.0) U	ND(0.50) U	**0.083 J/J**	ND(0.50) U	ND(0.50) U	**0.53 J/J**	ND(0.50) U/J	ND(0.50) U	**0.56**	**0.21 J/J**
NH-C10-360_340	12/14/12	ND(2.0) U	ND(0.50) U	**0.048 J/J**	ND(0.50) U	**2.2**	ND(5.0) U	ND(0.50) U/J	**0.43 J/J**	**3.4**	**0.25 J/J**
NH-C12-360_343	12/26/12	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.98**	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**0.47 J/J**	**0.16 J/J**
NH-C13-385_363	12/12/12	ND(2.0) U	ND(0.50) U	**0.049 J/J**	ND(0.50) U	**0.15 J/J**	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**7.3**	ND(0.50) U
NH-C16-390_375	12/04/12	ND(2.0) U	ND(0.50) U	**0.072 J/J**	ND(0.50) U	**2.0**	ND(5.0) U	**0.17 J/J**	ND(0.50) U	**24.0**	**1.2**
NH-C17-339_313	01/02/13	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.5**	ND(5.0) U	**0.10 J/J**	ND(0.50) U	**0.79**	**0.22 J/J**
NH-C18-365_348	12/07/12	ND(2.0) U	ND(0.50) U	ND(0.50) U/J	ND(0.50) U	**2.8**	ND(5.0) U	ND(0.50) U/J	**0.39 J/J**	**38.0**	**0.12 J/J**
NH-C19-360_343	01/11/13	ND(2.0) U	**0.13 J/J**	ND(0.50) U	ND(0.50) U	**2.3**	**2.8 J/J**	ND(0.50) U	ND(0.50) U	**45.0**	**0.19 J/J**
NH-C19-360_343_DUP-6	01/11/13	ND(2.0) U	**0.18 J/J**	ND(0.50) U	ND(0.50) U	**2.5**	**2.7 J/J**	ND(0.50) U	ND(0.50) U	**46.0**	**0.21 J/J**
NH-C19-360_349	12/21/12	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.1**	ND(5.0) U	**0.10 J/J**	**0.069 J/J**	**38.0**	**0.24 J/J**
NH-C19-360_353	01/11/13	ND(2.0) U	**0.20 J/J**	ND(0.50) U	ND(0.50) U	**2.2**	**2.4 J/J**	ND(0.50) U	ND(0.50) U	**44.0**	**0.18 J/J**
NH-C20-380_361	12/19/12	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.1**	ND(5.0) U	ND(0.50) U	ND(0.50) U	**71.0**	**0.098 J/J**
NH-C21-340_325	01/04/13	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.7**	ND(5.0) U	ND(0.50) U/B,J	ND(0.50) U	**18.0**	ND(0.50) U
NH-C21-340_325_DUP-4	01/04/13	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.6**	ND(5.0) U	ND(0.50) U/B,J	ND(0.50) U	**16.0**	ND(0.50) U
NH-C23-400_343	12/28/12	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.0**	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**58.0**	**0.31 J/J**
NH-C23-400_397	12/28/12	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**0.89**	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	**45.0**	**0.12 J/J**
NH-C23-400_343	01/11/13	ND(2.0) U	**0.25 J/J**	ND(0.50) U	ND(0.50) U	**0.32 J/J**	ND(5.0) U	**0.084 J/J**	ND(0.50) U	**26.0**	**0.15 J/J**
NH-C23-400_353	01/11/13	ND(2.0) U	**0.13 J/J**	ND(0.50) U	ND(0.50) U	**2.5**	ND(5.0) U	ND(0.50) U	ND(0.50) U	**80.0**	**0.37 J/J**
NH-C23-400_363	01/11/13	ND(2.0) U	**0.15 J/J**	ND(0.50) U	ND(0.50) U	**2.5**	**2.5 J/J**	ND(0.50) U	ND(0.50) U	**80.0**	**0.35 J/J**
NH-C23-400_373	01/11/13	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**2.2**	ND(5.0) U	ND(0.50) U	ND(0.50) U	**81.0**	**0.24 J/J**
NH-C23-400_383	01/11/13	ND(2.0) U	ND(0.50) U	ND(0.50) U	**0.037 J/J**	**2.0**	ND(5.0) U	ND(0.50) U	ND(0.50) U	**77.0 J**	**0.21 J/J**
NH-C23-400_393	01/11/13	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	**1.8**	**2.4 J/J**	ND(0.50) U	ND(0.50) U	**73.0**	**0.17 J/J**

TABLE 2B

ORGANIC ANALYTICAL RESULTS - B ZONE
Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

Abbreviations
EPA = The United States Environmental Protection Agency
ng/L = Nanogram per liter
ND = Not Detected at the specific
NT = Not Tested
µg/L = Microgram per liter

Validation Qualifiers
J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias.
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ = The analyte was analyzed for but was not detected above the reported value. The reported quantitation limit is approximate.
R The sample results are rejected. The presence or absence of the analyte cannot be verified. Rejected results are not usable for any purpose.

Laboratory Qualifiers
B = Compound is also detected in the laboratory method blank.
J = Result is detected below the reporting limit or is an estimated concentration.

TABLE 3A

INORGANIC ANALYTICAL RESULTS - A ZONE
Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

	Test Method	EPA 200.7						EPA 200.8	EPA 218.6	EPA 300.0				EPA 314.0	SM 2540C	SM 2320B
	Analyte/ Units:	Calcium (Dissolved) (mg/l)	Hardness Calcium (as CaCO3) (mg/l)	Iron (Dissolved) (mg/l)	Magnesium (Dissolved) (mg/l)	Potassium (Dissolved) (mg/l)	Sodium (Dissolved) (mg/l)	Chromium (Dissolved) (mg/l)	Chromium VI (µg/L)	Chloride (mg/l)	Nitrate as NO3 (mg/l)	Nitrite as NO2 (mg/l)	Sulfate as SO4 (mg/l)	Perchlorate (µg/L)	Total Dissolved Solids (mg/l)	Alkalinity, Total (As CaCO3) (mg/l)
Sample	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
4909C_293	01/07/13	**37.9**	**156**	**0.0123 J/J**	**14.8**	**10.5**	**49.5**	ND(0.001) U/J	ND(0.20) U	**15.0**	ND(0.10) U	ND(0.10) U	**28.0**	ND(2.0) U	**275**	**230**
4918A_297.5	12/20/12	**102**	**370**	**0.0515 J+/J**	**27.6**	**6.45**	**48.3**	ND(0.001) U	ND(0.20) UJ	**51.0**	**0.044 J/J**	ND(0.10) U	**61.0**	ND(2.0) U	**515**	**341**
4919D_295	12/06/12	**94.6**	**339**	ND(0.10) U	**25.1 /B**	**4.99**	**31.1 /B**	ND(0.001) U	ND(0.20) U	**50.0**	**17.0 J-**	ND(0.10) U	**74.0**	ND(2.0) UJ	**495**	**212**
NH-C10-360_313	12/14/12	**95.2**	**330**	ND(0.10) U	**22.5 /B**	**4.19**	**30.1**	**0.00172**	**1.4**	**21.0**	**2.5**	**0.026 J/J**	**61.0**	ND(2.0) U	**385**	**282**
NH-C12-360_313	12/26/12	**85.7**	**304**	ND(0.10) U	**21.8**	**4.76**	**31.5**	**0.000652 J/J**	**0.58**	**20.0**	**1.9**	ND(0.10) U	**68.0**	ND(2.0) U	**410**	**262**
NH-C13-385_338	12/12/12	**68.6**	**235**	**0.0307 J/J**	**15.5**	**3.9**	**28.6**	**0.00159**	**1.4**	**14.0**	**3.3**	**0.069 J/J**	**75.0**	ND(2.0) U	**315**	**182**
NH-C14-250_203	12/26/12	**96.6**	**338**	ND(0.10) U	**23.6**	**4.15**	**26.1**	**0.00314**	**2.7**	**49.0**	**8.0**	ND(0.10) U	**56.0**	ND(2.0) U	**460**	**228**
NH-C16-390_343	12/04/12	**109**	**375**	ND(0.10) U	**25.3 /B**	**5.2 J-**	**33.3**	**0.000701 J/J**	**0.53**	**30.0**	**5.1**	ND(0.10) U	**78.0**	ND(2.0) UJ	**450**	**316**
NH-C17-339_281	01/02/13	**89.2**	**320**	ND(0.10) U	**23.7**	**4.13**	**31.2**	**0.00094 J/J**	**0.68**	**21.0**	**3.2**	ND(0.10) U	**58.0**	ND(2.0) UJ	**470**	**278**
NH-C18-270_223	12/11/12	**90.5**	**292**	ND(0.10) U	**15.9 /B**	**5.19 J+**	**48.8**	**0.00256**	**2.1**	**32.0**	**2.6**	ND(0.10) U	**140**	ND(2.0) UJ	**415**	**166**
NH-C18-365_308	12/07/12	**112**	**388**	ND(0.10) U	**26.2 /B**	**4.69**	**32.4**	**0.00861**	**8.1**	**31.0**	**7.7**	ND(0.10) U	**89.0**	**2.9 J-**	**585**	**307**
NH-C19-290_233	12/21/12	**129**	**416**	**0.0119 J/J**	**22.8**	**4.92**	**33.4**	**0.00264**	**2.4**	**42.0**	**13.0 J-/BU**	ND(0.10) U	**72.0**	ND(2.0) U	**530**	**289**
NH-C19-360_303	12/21/12	**113**	**383**	ND(0.10) U	**24.6**	**4.9**	**39.4**	**0.00174**	**1.5**	**35.0**	**15.0 J-/BU**	ND(0.10) U	**66.0**	ND(2.0) U	**595**	**296**
NH-C20-380_322	12/19/12	**85.7**	**283**	ND(0.10) U	**19.3**	**4.28**	**30.3**	**0.000767 J/J**	**0.48**	**25.0**	**7.3**	ND(0.10) U	**70.0**	ND(2.0) U	**440**	**242**
NH-C21-260_213	01/03/13	**111**	**364**	ND(0.10) U	**21.1**	**4.27**	**28.5**	**0.0171**	**15.0**	**35.0**	**6.5**	ND(0.10) U	**130**	ND(2.0) UJ	**535**	**226**
NH-C21-260_213_DUP-3	01/03/13	**113**	**370**	ND(0.10) U	**21.3**	**4.35**	**28.9**	**0.0173**	**15.0**	**35.0**	**6.5**	ND(0.10) U	**140**	ND(2.0) UJ	**525**	**224**
NH-C21-340_283	01/04/13	**87.6**	**310**	ND(0.10) U	**22.0**	**4.11**	**29.3**	**0.0217**	**19.0**	**23.0**	**3.7**	**0.068 J/J**	**67.0**	ND(2.0) U	**385**	**246**
NH-C23-310_253	12/28/12	**127**	**441**	ND(0.10) U	**29.8**	**5.35**	**31.1**	**0.00136**	**0.96**	**44.0**	**14.0**	ND(0.10) U	**75.0**	ND(2.0) UJ	**590**	**312**
NH-C24-305_247	12/18/12	**119**	**415**	ND(0.10) U	**28.9 /B**	**5.11**	**31.9**	**0.00107**	**0.80**	**39.0**	**9.1**	ND(0.10) U	**67.0**	ND(2.0) U	**655**	**370**
NHE-1_240	12/11/12	**113**	**389**	ND(0.10) U	**26.2 /B**	**6.29 J+**	**43.8**	ND(0.001) U	**0.20 J/J**	**39.0**	**16.0**	ND(0.10) U	**71.0**	ND(2.0) UJ	**545**	**278**

Abbreviations:
EPA = The United States Environmental Protection Agency
mg/L = Milligram per liter
ND = Not Detected at the specific
NT = Not Tested
SM = Standard Method
µg/L = Microgram per liter

Validation Qualifiers:
J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias.
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ = The analyte was analyzed for but was not detected above the reported value. The reported quantitation limit is approximate.
R The sample results are rejected. The presence or absence of the analyte cannot be verified. Rejected results are not usable for any purpose.

Laboratory Qualifiers:
B = Compound is also detected in the laboratory method blank.
J = Result is detected below the reporting limit or is an estimated concentration.

TABLE 3B

INORGANIC ANALYTICAL RESULTS - B ZONE
Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

	Test Method	EPA 200.7						EPA 200.8	EPA 218.6	EPA 300.0				SM 2540C	SM 2320B
	Analyte/ Units:	Calcium (Dissolved) (mg/l)	Hardness Calcium (as CaCO3) (mg/l)	Iron (Dissolved) (mg/l)	Magnesium (Dissolved) (mg/l)	Potassium (Dissolved) (mg/l)	Sodium (Dissolved) (mg/l)	Chromium (Dissolved) (mg/l)	Chromium VI (µg/L)	Chloride (mg/l)	Nitrate as NO3 (mg/l)	Nitrite as NO2 (mg/l)	Sulfate as SO4 (mg/l)	Total Dissolved Solids (mg/l)	Alkalinity, Total (As CaCO3) (mg/l)
Sample	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
4909C_392	01/07/13	**70.8**	**247**	**0.0414 J/J**	**17.0**	**4.0**	**26.8**	ND(0.00136) U	**0.41**	**11.0**	**2.2**	ND(0.10) U	**76.0**	ND(260) U	**193**
4909C_398	01/07/13	**70.0**	**244**	**0.0251 J/J**	**16.7**	**4.01**	**26.4**	ND(0.00119) U	**0.32**	**11.0**	**2.2**	ND(0.10) U	**76.0**	**335**	**213**
4918A_483	12/20/12	**98.5**	**352**	**0.0748 J+/J**	**25.7**	**6.46**	**44.7**	**0.000613 J/J**	ND(0.20) UJ	**39.0**	**0.053 J/J**	ND(0.10) U	**76.0**	**425**	**293**
GW-18B_402	12/05/12	**65.9**	**241**	ND(0.10) U	**18.6 /B**	**3.1**	**25.7**	ND(0.001) U/J	**0.39**	**21.0**	**3.0**	**0.05 J/J**	**77.0**	**310**	**166**
GW-18B_405	12/06/12	**65.8**	**240**	ND(0.10) U	**18.5 /B**	**3.48**	**26.7 /B**	**0.000649 J/J**	**0.40**	**22.0**	**2.9**	ND(0.10) U	**78.0**	**415**	**176**
GW-18B_405_DUP-1	12/06/12	**62.3**	**230**	ND(0.10) U	**18.1 /B**	**3.25**	**25.1 /B**	**0.000612 J/J**	**0.41**	**22.0**	**2.7**	ND(0.10) U	**78.0**		**176**
GW-19B_401.5	12/13/12	**68.5**	**230**	ND(0.10) U	**14.2**	**4.4**	**25.5**	**0.000638 J/J**	**0.53**	**11.0**	**1.7**	ND(0.10) U	**61.0**	**240**	**182**
GW-19B_401.5_DUP-2	12/13/12	**66.7**	**225**	ND(0.10) U	**14.2**	**4.26**	**25.1**	**0.000659 J/J**	**0.55**	**11.0**	**1.7**	ND(0.10) U	**62.0**	**260**	**186**
GW-19B_405.5	12/13/12	**67.9**	**228**	ND(0.10) U	**14.3**	**4.31**	**25.5**	**0.000821 J/J**	**0.55**	**11.0**	**1.7**	ND(0.10) U	**63.0**	**245**	**182**
LA1-CW05_339	12/10/12	**84.8**	**308**	**0.514**	**23.3**	**4.96**	**34.4**	**0.00079 J/J**	**0.30**	**31.0**	**3.2**	ND(0.10) U	**83.0**	**307**	**232**
LA1-CW05_356	12/10/12	**88.1**	**317**	**0.84**	**23.5**	**5.25**	**34.2**	**0.00451**	**0.26**	**31.0**	**3.2**	ND(0.10) U	**85.0**	**415**	**236**
NH-C01-450_403	12/27/12	**103**	**360**	ND(0.10) U	**24.8**	**5.46**	**37.3**	ND(0.001) U	ND(0.20) U	**27.0**	**2.2**	ND(0.10) U	**88.0**	**470**	**290**
NH-C01-450_447	12/27/12	**109**	**378**	**0.0498 J/J**	**25.8**	**6.07**	**38.6**	**0.000475 J/J**	ND(0.20) U	**27.0**	**1.7**	ND(0.10) U	**91.0**	**480**	**296**
NH-C10-360_340	12/14/12	**90.4**	**318**	ND(0.10) U	**22.3 /B**	**3.98**	**29.8**	**0.0017**	**1.4**	**23.0**	**2.5**	ND(0.10) U	**64.0**	**405**	**276**
NH-C12-360_343	12/26/12	**89.6**	**316**	ND(0.10) U	**22.5**	**4.76**	**32.9**	**0.000601 J/J**	**0.51 J-/BU**	**18.0**	**1.7**	ND(0.10) U	**67.0**	**415**	**270**
NH-C13-385_363	12/12/12	**66.6**	**229**	ND(0.10) U	**15.2**	**4.04**	**28.2**	**0.00155**	**1.5**	**14.0**	**3.3**	ND(0.10) U	**72.0**	**295**	**184**
NH-C16-390_375	12/04/12	**92.6**	**321**	ND(0.10) U	**21.8 /B**	**4.87 J-**	**31.4**	**0.000515 J/J**	**0.43**	**26.0**	**6.8**	ND(0.10) U	**74.0**	**400**	**252**
NH-C17-339_313	01/02/13	**84.7**	**305**	ND(0.10) U	**22.6**	**3.95**	**30.6**	**0.001**	**0.72**	**20.0**	**3.1**	ND(0.10) U	**58.0**	**475**	**268**
NH-C18-365_348	12/07/12	**98.5**	**343**	ND(0.10) U	**23.6 /B**	**4.53**	**31.9**	**0.00724**	**6.8**	**31.0**	**6.3**	ND(0.10) U	**80.0**	**525**	**275**
NH-C19-360_349	12/21/12	**108**	**368**	ND(0.10) U	**23.5**	**4.78**	**38.3**	**0.00172**	**1.4**	**33.0**	**12.0 J-/BU**	ND(0.10) U	**69.0**	**485**	**278**
NH-C20-380_361	12/19/12	**84.5**	**289**	ND(0.10) U	**18.9**	**4.5**	**31.4**	**0.000634 J/J**	**0.43**	**22.0**	**6.9**	ND(0.10) U	**69.0**	**425**	**224**
NH-C21-340_325	01/04/13	**86.8**	**310**	ND(0.10) U/J	**22.6**	**4.21**	**29.2**	**0.023**	**21.0**	**23.0**	**3.3**	**0.047 J/J**	**66.0**	**380**	**244**
NH-C21-340_325_DUP-4	01/04/13	**85.6**	**303**	ND(0.10) U	**21.8**	**4.03**	**28.5**	**0.0234**	**21.0**	**23.0**	**3.3**	**0.053 J/J**	**66.0**	**375**	**244**
NH-C23-400_343	12/28/12	**93.6**	**322**	ND(0.10) U	**21.4**	**4.6**	**33.5**	**0.000797 J/J**	**0.42**	**25.0**	**7.4**	ND(0.10) U	**69.0**	**425**	**248**
NH-C23-400_397	12/28/12	**81.9**	**283**	ND(0.10) U	**19.1**	**4.24**	**30.3**	**0.000748 J/J**	**0.45**	**24.0**	**5.5**	ND(0.10) U	**75.0**	**405**	**210**

Abbreviations
EPA = The United States Environmental Protection Agency
mg/L = Milligram per liter
ND = Not Detected at the specific
NT = Not Tested
SM = Standard Method
µg/L = Microgram per liter

Validation Qualifiers
J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias.
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ = The analyte was analyzed for but was not detected above the reported value. The reported quantitation limit is approximate.
R The sample results are rejected. The presence or absence of the analyte cannot be verified. Rejected results are not usable for any purpose.

Laboratory Qualifiers
B = Compound is also detected in the laboratory method blank.
J = Result is detected below the reporting limit or is an estimated concentration.

TABLE 4

COMPARISON OF RECENT ANALYTICAL RESULTS BY DEPTH REGION/ZONE

Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy

Los Angeles County, California

Well	Sample Date	Sample Depth (feet)	Measured Verical Flow	Depth Region/ Zone	Trichloroethene (µg/l)	Tetrachloroethene (µg/l)	1,4-Dioxane (µg/l)	Chromium VI (µg/l)
NH-C16-390	10/08/09	345.0	Downward	DR 2	**3.6**	**0.77**	**1.8**	**0.23**
NH-C16-390	12/15/10	345.0		DR 2	**16.0**	**1.4**	**3.1**	**0.83**
NH-C16-390	12/04/12	343.0		A Zone	**19.0**	**1.5**	**3.4**	**0.53**
NH-C16-390	12/04/12	375.0		B Zone	**24.0**	**2.0**	**1.3**	**0.43**
NH-C18-365	10/19/09	236.2	NT	DR 2	**160**	**4.7**	**1.2**	**33.0**
NH-C18-365	12/16/10	236.2		DR 2	**130**	**11.0**	**3.3**	**51.0**
NH-C18-365	10/25/11	236.2		DR 2	**100**	**6.4**	**0.59**	**67.0**
NH-C18-365	12/07/12	308.0		A Zone	**70.0**	**2.5**	**1.6**	**8.1**
NH-C18-365	12/07/12	348.0		B Zone	**38.0**	**2.8**	**3.3**	**6.8**
NH-C19-360	10/09/09	305.0	Downward	DR 2	**95.0**	**2.0**	ND	**2.2**
NH-C19-360	12/15/10	305.0		DR 2	**94.0**	**5.8**	**1.6**	**1.9**
NH-C19-360	10/27/11	305.0		DR 2	**37.0**	**1.9**	**0.82**	**2.5**
NH-C19-360	12/21/12	303.0		A Zone	**42.0**	**1.7**	**1.8**	**1.5**
NH-C19-360	12/21/12	349.0		B Zone	**38.0**	**2.1**	**2.3**	**1.4**
NH-C19-360	01/11/13	303.0		A Zone	**69.0**	**2.0**	NT	NT
NH-C19-360	01/11/13	313.0		A Zone	**55.0**	**2.5**	NT	NT
NH-C19-360	01/11/13	323.0		A Zone	**45.0**	**3.3**	NT	NT
NH-C19-360	01/11/13	333.0		A Zone	**45.0**	**2.6**	NT	NT
NH-C19-360	01/11/13	343.0		B Zone	**46.0**	**2.5**	NT	NT
NH-C19-360	01/11/13	349.0		B Zone	**38.0**	**2.1**	NT	NT
NH-C19-360	01/11/13	353.0		B Zone	**44.0**	**2.2**	NT	NT
NH-C20-380	10/09/09	325.0	NT	DR 2	**34.0**	**5.2**	**3.6**	**0.47**
NH-C20-380	12/14/10	325.0		DR 2	**38.0**	**5.1**	**4.9**	**0.43**
NH-C20-380	10/26/11	325.0		DR 2	**45.0**	**1.6**	**1.8**	**0.32**
NH-C20-380	12/19/12	322.0		A Zone	**46.0**	**1.3**	**1.6**	**0.48**
NH-C20-380	12/19/12	361.0		B Zone	**71.0**	**1.1**	**1.3**	**0.43**
NH-C21-340	10/09/09	285.0	NT	DR 2	**170**	**4.6**	**1.5**	**3.0**
NH-C21-340	12/17/10	285.0		DR 2	**21.0**	**3.3**	**1.1**	**4.6**
NH-C21-340	10/24/11	285.0		DR 2	**20.0**	**1.8**	ND	**5.4**
NH-C21-340	01/04/13	283.0		A Zone	**15.0**	**0.51**	**2.1**	**19.0**
NH-C21-340	01/04/13	325.0		B Zone	**18.0**	**1.7**	**2.1**	**21.0**

Abbreviations:

DR 2 = Depth Region 2

ND = not detected

NT = not tested

TABLE 5

VERTICAL FLOW MEASUREMENT RESULTS

Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy

Los Angeles County, California

Well	Date Tested	Top of Screen [feet bgs]	Bottom of Screen [feet bgs]	Geological unit assignment (estimated)	A/B zone contact [feet bgs]	Max Flow Rate [gpm][1]	In/Out Inflection Depth [feet bgs]	Comments
NH-C05-460	1/17/2013	390	460	B Zone	349.33	0.128	N/A	Upward flow between 390 and 398 feet bgs and below. Could not profile entire screened interval due to data cable length restriction.
NH-C10-280	12/12/2012	220	280	A Zone	320.74	-0.04	272	Downward flow between 242 and 280 feet bgs.
NH-C10-360	12/12/2012	310	360	A and B Zone	320.74	-0.21	342	Downward flow between 320 and 360 feet bgs. Greatest downward flow rate of any well tested.
NH-C16-320	12/10/2012	250	300	A and B Zone	359.61	-0.07	N/A	No significant flow.
NH-C16-390	12/10/2012	340	390	A Zone	359.61	-0.085	366	Downward flow between 358 and 390 feet bgs.
NH-C19-290	1/28/2013	230	290	A Zone	337.5	-0.032	270	Downward flow between 260 and 280 feet bgs.
NH-C19-360	1/28/2013	300	360	A and B Zone	337.5	-0.08	342	Downward flow between 310 and 360 feet bgs.
NH-C23-310	1/17/2013	250	310	A Zone	340	0.165	294	Upward flow between 268 and 310 feet bgs.
NH-C23-400	12/10/2012	340	400	B Zone	340	-0.09	366	Downward flow between 351 and 390 feet bgs.

Notes

1. Negative values reflect downward flow, positive values reflect upward flow

Abreviations

bgs = below ground surface

TABLE 6

PNEUMATIC SLUG TEST RESULTS

Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy

Los Angeles County, California

Well	Test Date	Top of Screen [feet bgs]	Bottom of Screen [feet bgs]	A Zone/B Zone Contact Cepth [feet bgs]	Screened in	Approximate Displacement [feet]	Analytical method		Comments
							Springer-Gelhar K (ft/day)[1]	Bouwer-Rice K (ft/day)[2]	
NH-C01-450	1/3/2013	400	450	366.08	B Zone	0.17 0.83 0.83 1.25 1.67	68.81 95.75 61.33 86.63 61.33		assume unconfined, saturated thickness = bottom of screen to water table
NH-C02-325	1/4/2013	275	325	268.52	B Zone	0.17 0.17 0.42 0.42 0.83 1.25 2.08 2.08	85.35 76.07 88.26 75.50 79.99 81.52 81.47 82.90		assume unconfined, saturated thickness = bottom of screen to water table
NH-C03-380	1/29/2013	340	380	321.28	B Zone	0.42 0.83 0.83 2.50	123.90 101.50 98.39 110.40		assume unconfined, saturated thickness = bottom of screen to water table
NH-C09-310	1/29/2013	250	310	329.83	A zone	0.42 0.83 1.67 2.50	48.71 43.42 41.34 40.91		unconfined, saturated thickness = bottom of A Zone to water table, critically damped
NH-C10-280	1/29/2013	220	280	320.74	A zone	0.42 0.83 2.08	47.70 47.40 37.18	36.73 40.81 40.33	unconfined, saturated thickness from bottom of A zone to water table
NH-C12-280	1/30/2013	210	280	326.17	A zone	0.42 0.83 1.67 2.50	48.01 43.81 50.74 40.30		unconfined, saturated thickness = from bottom of A zone to water table, critically damped
NH-C13-385	1/29/2013	335	385	342.59	A and B zone	0.42 0.83 1.67 2.50	105.30 83.68 74.58 93.89		assume unconfined, saturated thickness = bottom of screen to water table
NH-C14-250	1/30/2013	200	250	306.2	A zone	0.50 0.83 1.67 2.50	26.78 22.08 23.93 23.87	20.22 19.46 17.37 17.92	unconfined, saturated thickness = bottom of A zone to water table
NH-C16-390	1/30/2013	340	390	359.61	A and B zone	0.42 0.83 1.67 1.67	61.70 56.80 57.00 56.00		assume unconfined, saturated thickness = bottom of screen to water table
NH-C17-255	1/30/2013	185	255	286.03	A zone	0.42 1.25 1.67	43.62 34.65 35.39	37.91 46.45 48.34	unconfined, saturated thickness = bottom of A zone to water table
NH-C19-290	2/6/2013	230	290	337.5	A zone	0.42 0.42 0.83 1.67 2.50	37.26 52.64 68.68 43.34 34.42		unconfined, saturated thickness = bottom of A zone to water table, critically damped
NH-C19-360	2/6/2013	300	360	337.5	A and B zone	0.42 0.83 1.67 1.67	114.30 64.26 64.28 63.00		assume unconfined, saturated thickness = bottom of screen to water table
NH-C22-460	1/29/2013	390	460	367.87	B zone	0.42 0.83 1.67 2.50	75.60 75.00 82.00 88.00		assume unconfined, saturated thickness = bottom of screen to water table
NH-C23-310	1/29/2013	250	310	340	A zone	0.42 0.83 1.67 1.67 2.50	34.92 33.17 29.39 28.78 27.50	23.79 21.44 21.1 18.48 21.97	unconfined, saturated thickness = bottom of A zone to water table

Notes:

1. All K estimates assume no vertical anisotropy
2. Additional analysis for non-oscillatory time-drawdown curves

FIGURES

Penrose Landfill (closed)
Tujunga Pit (closed)
Newberry Landfill (closed)
Strathern Inert Landfill (active)
Strathern Elementary School
Former Bendix Facility
Hewitt Pit (closed)
Hawker Pacific
Former Lockheed Martin Facilities
Pacific Steel
Fleetwood Machine Products
Valhalla Memorial Park
Victory-Vineland Landfill (closed)

4928C 3/07: ND(0.5)
4928A 3/07: ND(0.5)
4918B 3/07: 36.6
4918A* 1.9
NH-VPB-09** 4/12: 0.5
NH-VPB-10** 11/07: 0.7
NH-C22-360 12/10: 7.3
NH-C16-320 10/11: 7.8
NH-C05-320 4/12: 20.0
NH-C01-325 4/12: 12.0
NH-C16-390 19
4919D 15
NH-C13-385 7.7
NH-C23-310 253.0: 1.9 263.0: 2.4 273.0: 2.2 283.0: 2.2 293.0: 2.5 303.0: 2
NH-C11-295 12/10: 9.0
4909C 50
NH-VPB-06 4/12: 4.5
NH-C20-380 46
NH-C09-310 10/11: 73.0
NH-C19-290 233.0: 79 243.0: 76 253.0: 77 J 263.0: 77 273.0: 79 283.0: 82
NH-C19-360 303.0: 69 J 313.0: 55 323.0: 45 333.0: 45
NHE-1 38
GW-18A 10/12: 9.2
GW-11-316 10/12: 25.0
GW-11-273 10/12: 22.0
GW-19A 10/12: 170.0
GW-12A-284 10/11: 36.0
GW-16-277 10/12: 52.0
NH-C18-270 0.59
NH-C18-365 70
GW-16-317 10/12: 47.0
NH-VPB-02 4/12: 8.6
NH-C21-260 24
NH-C21-340 15
GW-3 10/12: 14.0
GW-7 10/12: 12.0
GW-15 10/12: 15.0
GW-8 10/12: 4.6
GW-10 10/12: 15.0
GW-9 10/12: 13.0
GW-2 10/12: 6.6
GW-14A 10/12: 3.2
GW-14B 10/12: 5.6
GW-23 10/12: 1.8
GW-22 10/12: 15.0
GW-6 10/12: 1.9
GW-4 10/12: 4.7
GW-5 10/12: 0.8
GW-21 10/12: ND(1.0)
GW-1 10/12: 25.0
GW-20 10/12: ND(1.0)
GW-17-282 10/12: 460.0
NHE-3 7/12: 79.0
NHE-2 10/12: 120.0
NHE-5
NHE-4 7/12: 13.0
NHE-6
NH-VPB-07 4/12: 1.2
NH-C08-295 10/11: 2.1
NH-C24-305 0.24 J/J
NH-C07-300 10/11: ND(5.0)
PST-MW1P NS
PST-MW2P NS
NH-C10-280 10/11: 110
NH-C10-360 3.2
NH-C12-280 10/11: 18.0
NH-C12-360 0.5 J/J
NH-C14-250 6.1
NHE-7 7/12: 10.9
LC1-CW03 10/12: ND(0.5)
LC1-CW08 10/12: 0.6
NH-C25-290 11/11: 2.3
LC1-CW06 10/12: 190.0
3830S 4/12: 5.7
NHE-8 7/12: 17.2
NH-C17-255 10/11: 59.0
NH-C17-339 0.91
NH-C15-330 12/10: 9.5
NH-C15-240 12/10: 14.0
NH-VPB-08 3/10: 13.0
NH-C02-220 4/12: 7.9
3831Q 12/10: 92.0
NH-VPB-05 4/12: 78.0
3851M 4/12: 22.0
3850AB 9/12: 21.0
LA1-CW09 10/12: 16.0
LA1-CW07 10/12: 340.0
LA1-CW03R 3/07: 130.0
LB5-CW03 10/12: 11.0
LB6-CW10 3/07: 36.0
LB6-CW09 1/97: 34.2
LB6-CW17 12/07: 6.1
LB6-CW16 10/12: 9.1
4949C 4/12: 1.7
PA1-MW3 4/12: 13.0
PA1-MW5 4/12: 14.0
PA1-MW4 4/12: 9.6
PA1-MW6 4/12: 19.0

N
0 1,500 3,000
Feet

*Isoconcentration lines are based on December 2012 samples and may not reflect groundwater basin dynamics resulting rom variable pumping schedules or complexity due to multiple COC sources.

EXPLANATION

Trichloroethene Concentration
In Micrograms per Liter (µg/L)
Groundwater Monitoring Well
Sampled in A Zone

○	<5	●	25 - 50
●	5 - 10	●	50 - 100
●	10 - 25	●	> 100

● Monitoring Well Sampled December 2012

13 Trichloroethene Concentration in Groundwater (µg/L)

Samples not collected in December 2012 indicated in italics.

Recent sampling results are indicated in bold.

Depths of multiple depth-discrete samples are indicated in feet below top of casing.

J Estimated Value.

* Anomolous trichloroethene concentration, data not used for contouring

▲ NHOU Extraction Well

Concentration Contours (µg/L)* Dashed Where Inferred

5	50
10	100
25	

514 Line of Estimated Equal Elevation of Groundwater December 2012 (Feet NAVD88)

** Anomalous groundwater elevation data not used for contouring.

Approximate Boundary San Fernando Valley Investigation Area 1

Aerial Photograph: DigitalGlobe, June 2009

DRAWN: RJP	PROJECT NO: 4088115718		
REV:	SCALE: AS SHOWN		
CHECKED: DCD	APPROVED: MDT		
DATE: 7/2013	DATE: 7/2013		

amec

Phase I Pre-design Investigation
North Hollywood Operable Unit
Los Angeles County, California

Trichloroethene Distribution
in A Zone Groundwater
First Semiannual Sampling Event
December 2012

FIGURE
1a

Prepared by: reuben.pillsbury Friday, August 09, 2013 4:54:19 PM
P:\4088115718_NHOU\GIS\Projects\Phase\PreDesign_Investigation\12Q4_withCurrentValueFigure01a_TCE-A.mxd

Penrose Landfill (closed)

Tujunga Pit (closed)

Newberry Landfill (closed)

Strathern Inert Landfill (active)

Strathern Elementary School

Hewitt Pit (closed)

Former Bendix Facility

Hawker Pacific

Former Lockheed Martin Facilities

Pacific Steel

Fleetwood Machine Products

Valhalla Memorial Park

Victory-Vineland Landfill (closed)

NH-C22-460
12/10: 7.2

4918A*
2.6

NH-C01-450
403.0: 2.2
447.0: 0.56

NH-C16-390
24

NH-C05-460
1/10: 120.0

NH-C13-385
7.3

4909C
392.0: 2.7
398.0: 3.6

NH-C20-380
71

NH-C23-400
343.0: 58
353.0: 80
363.0: 80
373.0: 81
383.0: 77 J
393.0: 73
397.0: 45

GW-18B
402.0: 8.4
405.0: 7.4

GW-11-352
10/12: 56.0

GW-12A-349
10/12: 2.5

GW-16-347
10/12: 35.0

GW-19B
401.5: 0.42 J/J
405.5: 0.39 J/J

NH-C19-360
343.0: 46
349.0: 38
353.0: 44

NH-C18-365
38

NH-C03-380
4/12: 0.8

NH-C10-360
3.4

NH-C21-340
18

NHE-6
6.8
3/12

NH-C24-410
11/11: 0.4

LC1-CW02
10/12: ND(0.5)

LC1-CW05
10/12: ND(0.5)

NH-C12-360
0.47 J/J

LB5-CW02
10/12: ND(0.5)

LA1-CW05
339.0: 2
356.0: 2.5

LB6-CW08
1/97: 7.3

LB6-CW14
12/06: 8.0

NH-C17-339
0.79

3851N
4/12: 0.5

NH-C02-325
4/12: 3.1

N

0 1,500 3,000
Feet

*Isoconcentration lines are based on December 2012 samples and may not reflect groundwater basin dynamics resulting rom variable pumping schedules or complexity due to multiple COC sources.

EXPLANATION

Trichloroethene Concentration
In Micrograms per Liter (µg/L)
Groundwater Monitoring Well
Sampled in B Zone

- <5
- 5 - 10
- 10 - 25
- 25 - 50
- 50 - 100
- >100

Monitoring Well Sampled December 2012

8 Trichloroethene Concentration in Groundwater (µg/L)
Samples not collected in December 2012 indicated in italics.
Recent sampling results are indicated in bold.
Depths of multiple depth-discrete samples are indicated in feet below top of casing.

J Estimated Value

* Anomalous trichloroethene concentration, result not used for contouring

NHOU Extraction Well

Concentration Contours (µg/L)*
Dashed Where Inferred

- 5
- 10
- 25
- 50
- 100

514 Line of Estimated Equal Elevation of Groundwater December 2012 (Feet NAVD88)

Approximate Boundary San Fernando Valley Investigation Area 1

Aerial Photograph: DigitalGlobe, June 2009

DRAWN: RJP	PROJECT NO: 4088115718		
REV:	SCALE: AS SHOWN		
CHECKED: DCD	APPROVED: MDT		
DATE: 7/2013	DATE: 7/2013	amec	Phase I Pre-design Investigation North Hollywood Operable Unit Los Angeles County, California

Trichloroethene Distribution
in B Zone Groundwater
First Semiannual Sampling Event
December 2012

FIGURE
1b

Prepared by: reuben.pillsbury Friday, August 09, 2013 4:59:43 PM
P:\4088115718_NHOU\GIS\Projects\Phase1\PreDesign_Investigation\12Q4_withCurrentValue\Figure01b_TCE-B.mxd

4928C
2.4

Tujunga Pit (closed)
Newberry Landfill (closed)

4928A
1.8

Penrose Landfill
(closed)

4918B
3/07: 6.3

4918A
ND(0.5)

NH-VPB-09**
4/12: 2.4

NH-VPB-10**
11/07: 0.1

NH-C22-360
12/10: ND(1.02)

Strathern Elementary School

Strathern Inert
Landfill (active)

NH-C01-325
4/12: 61.0

NH-C16-320
10/11: 12.0

NH-C16-390
1.5

NH-C05-320
4/12: 4.1

GW-3
10/12: 8.2

4919D
0.55

GW-7
10/12: 4.0

NH-C23-310
253.0: 1.7
263.0: 2.1
273.0: 2.4
283.0: 2.5
293.0: 2.4
303.0: 2.3

GW-2
10/12: 5.3

GW-15
10/12: 4.0

GW-14A
10/12: 2.1

NH-C13-385
0.25 J/J

GW-8
10/12: 4.3

GW-14B
10/12: 10.0

NH-VPB-07
4/12: 3.1

NH-C11-295
12/10: 9.7

GW-10
10/12: 5.2

GW-23
10/12: 1.4

Hewitt Pit (closed)

GW-9
10/12: 4.7

GW-22
10/12: 2.2

4909C
14

NH-VPB-06
4/12: 2.0

Former Bendix
Facility

GW-6
10/12: 0.9

NH-C20-380
1.3

NH-C08-295
10/11: 4.6

NH-C09-310
10/11: 32.0

NHE-1
2.6

GW-4
10/12: 0.7

Hawker Pacific

NH-C24-305
1.6

NH-C19-290
233.0: 2.1
243.0: 1.6
253.0: 1.9
263.0: 1.7
273.0: 2.1
283.0: 2

GW-18A
10/12: 3.0

GW-5
10/12: ND(1.0)

GW-11-316
10/12: 10.0

GW-21
10/12: ND(1.0)

GW-1
10/12: 2.5

GW-20
10/12: ND(1.0)

GW-11-273
10/12: 11.0

NH-C07-300
10/11: ND(0.5)

PST-MW1P
NS

GW-19A
10/12: 11.0

GW-17-282
10/12: 23.0

Pacific Steel

PST-MW2P
NS

GW-12A-284
10/11: 6.6

NH-C19-360
303.0: 2
313.0: 2.5
323.0: 3.3
333.0: 2.6

NHE-3
7/12: 8.6

Fleetwood Machine Products

GW-16-277
10/12: 12.0

NH-C10-280
10/11: 21

NH-C18-270
ND(0.5)

NHE-2
10/12: 21.0

NH-C10-360
3.3

NH-C18-365
2.5

NHE-5

GW-16-317
10/12: 9.3

NH-VPB-02
4/12: 1.6

NHE-4
7/12: 4.2

NH-C21-260
0.76

NH-C14-250
16

NH-C21-340
0.51

Victory-Vineland Landfill (closed)

NH-C15-240
12/10: 8.8

NH-C15-330
12/10: 6.7

NH-VPB-08
3/10: 1.9

NH-C02-220
4/12: 0.4

LB6-CW17
12/07: 99.5

4949C
4/12: 2.2

LB6-CW16
10/12: 26.0

LB6-CW09
1/97: 370.0

PA1-MW3
4/12: 65.0

PA1-MW5
4/12: 51.0

PA1-MW4
4/12: 43.0

PA1-MW6
4/12: 69.0

LC1-CW03
10/12: 5.6

LB6-CW10
3/07: 270.0

LC1-CW08
10/12: 7.9

Former Lockheed
Martin Facilities

NH-C25-290
11/11: 24.0

LC1-CW06
10/12: 12.0

LA1-CW03R
3/07: 200.0

LB5-CW03
10/12: 14.0

3830S
4/12: 13.0

LA1-CW07
10/12: 210.0

NHE-8
7/12: 6.5

NHE-7
7/12: 6.6

Valhalla Memorial Park

LA1-CW09
10/12: 21.0

3850AB
9/12: 100.0

NH-C17-255
10/11: 5.1

NH-C17-339
1.7

3831Q
12/10: 5.5

NH-VPB-05
4/12: 3.6

3851M
4/12: 35.0

N

0 1,500 3,000
Feet

*Isoconcentration lines are based on December 2012 samples and may not reflect groundwater basin dynamics resulting rom variable pumping schedules or complexity due to multiple COC sources.

EXPLANATION

Tetrachloroethene Concentration
In Micrograms per Liter (µg/L)
Groundwater Monitoring Well
Sampled in A Zone

- <5
- 5 - 10
- 10 - 25
- 25 - 50
- 50 - 100
- >100

Monitoring Well Sampled December 2012

6.2 Tetrachloroethene Concentration in Groundwater (µg/L)

Samples not collected in December 2012 indicated in italics.

Recent sampling results are indicated in bold.

Depths of multiple depth-discrete samples are indicated in feet below top of casing.

J Estimated Value

* Anomalous tetrachloroethene concentation, data not used for contouring

NHOU Extraction Well

Concentration Contours (µg/L)*
Dashed Where Inferred

- 5
- 10
- 25
- 50
- 100

514 Line of Estimated Equal Elevation of Groundwater December 2012 (Feet NAVD88)

** Anomalous groundwater elevation data not used for contouring

Approximate Boundary
San Fernando Valley
Investigation Area 1

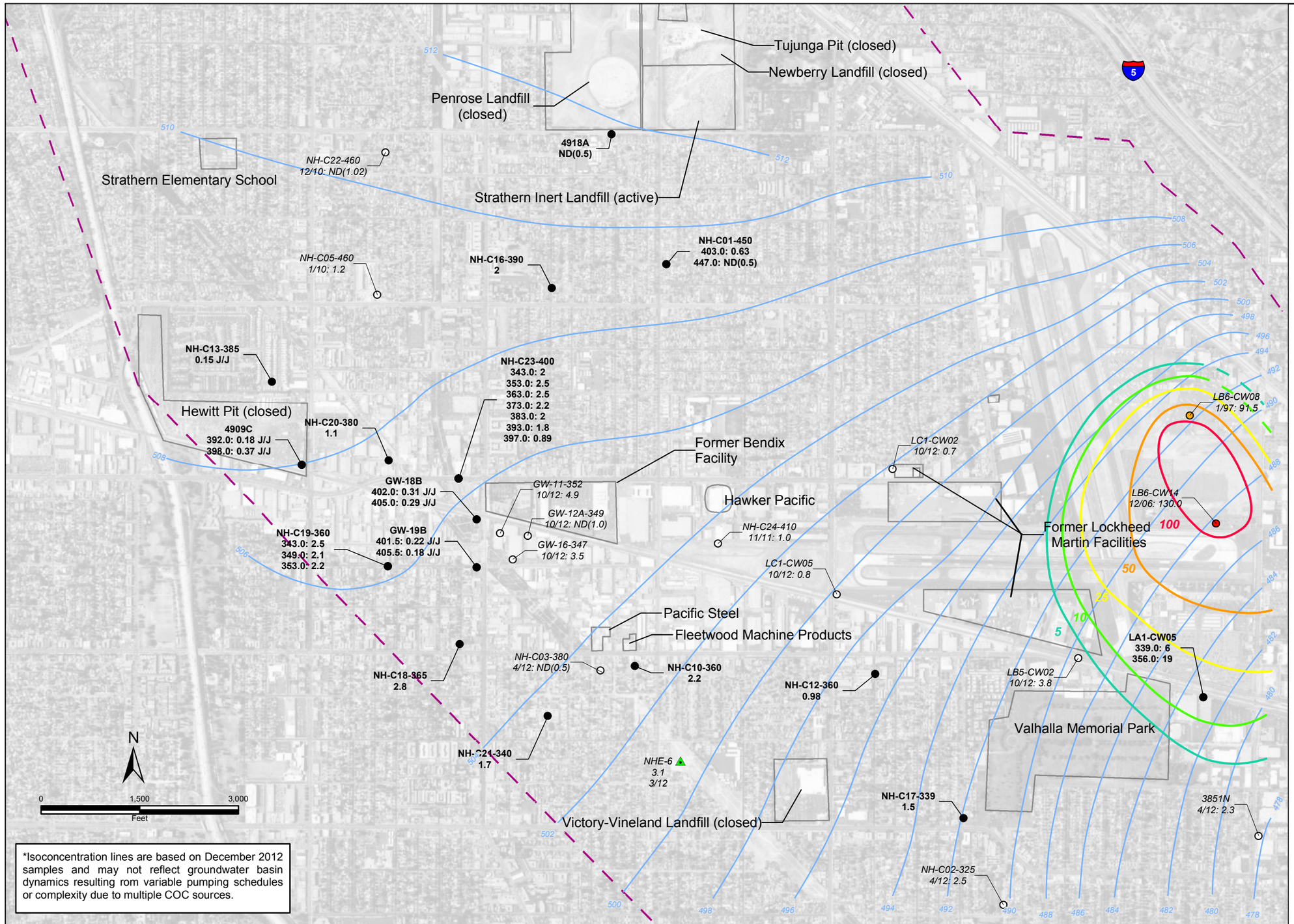
Aerial Photograph: DigitalGlobe, June 2009

DRAWN: RJP	PROJECT NO: 4088115718		
REV:	SCALE: AS SHOWN		
CHECKED: DCD	APPROVED: MDT		
DATE: 7/2013	DATE: 7/2013	amec	Phase I Pre-design Investigation North Hollywood Operable Unit Los Angeles County, California

Tetrachloroethene Distribution
in A Zone Groundwater
First Semiannual Sampling Event
December 2012

FIGURE
2a

Prepared by: reuben.pillsbury Friday, August 09, 2013 4:58:57 PM
P:\4088\115718_NHOU\GIS\Projects\Phase\PreDesign_Investigation\12Q4_withCurrentValue\Figure02a_PCE-A.mxd



*Isoconcentration lines are based on December 2012 samples and may not reflect groundwater basin dynamics resulting rom variable pumping schedules or complexity due to multiple COC sources.

EXPLANATION

Tetrachloroethene Concentration
In Micrograms per Liter (µg/L)
Groundwater Monitoring Well
Sampled in B Zone

- <5
- 5 - 10
- 10 - 25
- 25 - 50
- 50 - 100
- >100

Monitoring Well Sampled December 2012

140 Tetrachloroethene Concentration in Groundwater (µg/L)

Samples not collected in December 2012 indicated in italics.

Recent sampling results are indicated in bold.

Depths of multiple depth-discrete samples are indicated in feet below top of casing.

J Estimated Value

NHOU Extraction Well

Concentration Contours (µg/L)*
Dashed Where Inferred

- 5
- 10
- 25
- 50
- 100

514 Line of Estimated Equal Elevation of Groundwater December 2012 (Feet NAVD88)

Approximate Boundary San Fernando Valley Investigation Area 1

Aerial Photograph: DigitalGlobe, June 2009

DRAWN: RJP	PROJECT NO: 4088115718	Phase I Pre-design Investigation North Hollywood Operable Unit Los Angeles County, California	Tetrachloroethene Distribution in B Zone Groundwater First Semiannual Sampling Event December 2012
REV:	SCALE: AS SHOWN		FIGURE **2b**
CHECKED: DCD	APPROVED: MDT		
DATE: 7/2013	DATE: 7/2013		

amec

Prepared by: reuben.pillsbury Friday, August 09, 2013 4:58:15 PM
P:\4088\115718_NHOU\GIS\Projects\Phase\PreDesign_Investigation\12Q4_withCurrentValue\Figure02b_PCE-B.mxd

Penrose Landfill (closed)

Tujunga Pit (closed)

Newberry Landfill (closed)

Strathern Elementary School

Strathern Inert Landfill (active)

Hewitt Pit (closed)

Former Bendix Facility

Hawker Pacific

Former Lockheed Martin Facilities

Pacific Steel

Fleetwood Machine Products

Valhalla Memorial Park

Victory-Vineland Landfill (closed)

4918B 3/07: 5.2

4918A 16

NH-VPB-09** 10/98: ND(5.0)

NH-VPB-10** 12/04: ND(0.5)

NH-C22-360 12/10: ND(0.8)

NH-C01-325 4/12: ND(100.0)

NH-C05-320 4/11: 3.0

NH-C16-390 3.4

NH-C16-320 10/11: 1.6

GW-3 10/12: 11.0

GW-7 10/12: 5.8

GW-15 10/12: 5.9

GW-8 10/12: 8.0

GW-10 10/12: 4.2

GW-2 10/12: 6.1

GW-14A 10/12: 4.7

GW-14B 10/12: 7.2

GW-23 10/12: 2.2

GW-22 10/12: 3.7

GW-6 10/12: 3.0

GW-4 10/12: 34.0

GW-5 10/12: 38.0

GW-21 10/12: 15.0

GW-20 10/12: 22.0

NH-C07-300 10/11: 28.0

GW-1 10/12: 27.0

GW-17-282 10/12: 29.0

NHE-3 7/12: 2.0

4919D 0.67

NH-C13-385 ND(0.14)

NH-C11-295 12/10: ND(0.8)

4909C ND(0.27)

NH-VPB-06 4/12: ND(100.0)

NH-C23-310 2.7

GW-11-273 10/12: 6.6

GW-18A 10/12: 7.4

GW-11-316 10/12: 8.3

GW-19A 10/12: 2.8

GW-16-317 10/12: 6.4

GW-16-277 10/12: 8.7

NHE-2 10/12: 4.6

GW-12A-284 10/11: 4.5

NH-C20-380 1.6

NHE-1 3.2

NH-C19-290 ND(0.76)

NH-C19-360 1.8

NH-C09-310 10/11: 7.0

NH-C18-270 ND(0.24)

NH-C18-365 1.6

NH-VPB-02 10/11: ND(0.5)

NH-C21-260 0.86

NH-C21-340 2.1

NH-C08-295 10/11: 1.4

NH-C24-305 0.89

PST-MW1P NS

PST-MW2P NS

NH-C10-280 10/11: 1.9

NH-C10-360 1.6

NHE-5

NHE-4 7/12: 1.1

NHE-6

NH-C14-250 ND(0.44)

NH-C15-240 12/10: ND(0.8)

NH-C15-330 12/10: ND(0.8)

NH-VPB-07 4/12: ND(100.0)

NH-VPB-08 12/06: ND(20.0)

LC1-CW03 4/12: 1.7

LC1-CW08 4/12: 3.0

NH-C25-290 11/11: 4.5

LC1-CW06 4/12: 1.2

3830S 4/12: 2.5

NH-C12-280 10/11: 1.1

NH-C12-360 1.2

NHE-7 7/12: 1.3

LB5-CW03 4/11: 4.5

NHE-8 7/12: 1.1

NH-C17-339 1.2

NH-C17-255 10/11: 2.2

3831Q 12/10: 0.8

NH-VPB-05 10/11: ND(0.5)

NH-C02-220 10/11: ND(0.5)

4949C 12/06: ND(2.0)

LB6-CW17 4/12: 0.7

LB6-CW16 4/12: ND(1.0)

PA1-MW3 4/12: 1.4

LB6-CW09 4/12: 0.6

PA1-MW5 4/12: ND(1.0)

PA1-MW4 4/12: ND(1.0)

PA1-MW6 4/12: 1.7

LB6-CW10 3/07: 1.7

LA1-CW03R 3/07: 1.5

LA1-CW07 4/12: 1.3

LA1-CW09 12/10: 1.4

3850AB 4/12: 1.3

3851M 6/06: ND(2.0)

N

0 1,500 3,000

Feet

*Isoconcentration lines are based on December 2012 samples and may not reflect groundwater basin dynamics resulting rom variable pumping schedules or complexity due to multiple COC sources.

EXPLANATION

1,4-Dioxane Concentration
In Micrograms per Liter (µg/L)
Groundwater Monitoring Well
Sampled in A Zone

- <1
- 1 - 5
- 5 - 10
- 10 - 20
- >20

Monitoring Well Sampled December 2012

4.2 1,4-Dioxane Concentration in Groundwater (µg/L)
Samples not collected in December 2012 indicated in italics.
Recent sampling results are indicated in bold.
Depths of multiple depth-discrete samples are indicated in feet below top of casing.

J Estimated Value

NHOU Extraction Well

Concentration Contours (µg/L)*
Dashed Where Inferred

- 1
- 3
- 10
- 20

514 Line of Estimated Equal Elevation of Groundwater December 2012 (Feet NAVD88)

** Anomalous groundwater elevation data not used for contouring.

Approximate Boundary San Fernando Valley Investigation Area 1

Aerial Photograph: DigitalGlobe, June 2009

DRAWN: RJP	PROJECT NO: 4088115718	amec	Phase I Pre-design Investigation North Hollywood Operable Unit Los Angeles County, California
REV:	SCALE: AS SHOWN		1,4-Dioxane Distribution in A Zone Groundwater First Semiannual Sampling Event December 2012
CHECKED: DCD	APPROVED: MDT		FIGURE 3a
DATE: 7/2013	DATE: 7/2013		

Prepared by: reuben.pillsbury Friday, August 09, 2013 4:55:36 PM
P:\4088\115718_NHOU\GIS\Projects\Phase\PreDesign_Investigation\12Q4_withCurrentValue\Figure03a_Diox-A.mxd

Tujunga Pit (closed)
Newberry Landfill (closed)
Strathern Inert Landfill (active)
Penrose Landfill (closed)
4918A 8.7
NH-C22-460 12/10: ND(0.8)
Strathern Elementary School
NH-C01-450 403.0: 1.8 447.0: 1.9
NH-C16-390 1.3
NH-C05-460 10/06: ND(20.0)
NH-C13-385 ND(0.16)
Hewitt Pit (closed)
4909C 392.0: ND(0.13) 398.0: ND(0.14)
NH-C23-400 343.0: 2.2 397.0: 1.4
GW-18B 402.0: ND(0.38) 405.0: 0.41
Former Bendix Facility
NH-C20-380 1.3
GW-11-352 10/12: 3.6
GW-12A-349 10/12: 3.1
GW-16-347 10/12: 3.3
Hawker Pacific
NH-C24-410 12/10: ND(0.8)
NH-C19-360 2.3
GW-19B 401.5: ND(0.07) 405.5: ND(0.1)
Pacific Steel
NH-C03-380 4/11: ND(1.0)
NH-C18-365 3.3 J
Fleetwood Machine Products
NH-C21-340 2.1
NH-C10-360 1.5
NHE-6 ND 3/12
Victory-Vineland Landfill (closed)
LB6-CW08 4/12: 0.6
LC1-CW02 4/12: 1.0
Former Lockheed Martin Facilities
LC1-CW05 4/12: 0.4
LB6-CW14 4/12: 1.0
LB5-CW02 4/12: 1.5
NH-C12-360 0.86
LA1-CW05 339.0: 1.8 356.0: 1.9 J
Valhalla Memorial Park
NH-C17-339 1.2
3851N 12/04: ND(2.0)
NH-C02-325 10/11: ND(0.5)
5
N
0 1,500 3,000
Feet

*Isoconcentration lines are based on December 2012 samples and may not reflect groundwater basin dynamics resulting rom variable pumping schedules or complexity due to multiple COC sources.

EXPLANATION

1,4-Dioxane Concentration In Micrograms per Liter (µg/L)
Groundwater Monitoring Well Sampled in B Zone

○ <1 ● 1 - 5

● Monitoring Well Sampled December 2012

1.0 1,4-Dioxane Concentration in Groundwater (µg/L)
Samples not collected in December 2012 indicated in italics.
Recent sampling results are indicated in bold.
Depths of multiple depth-discrete samples are indicated in feet below top of casing.

J Estimated Value. Analyte Detected at a Level Less Than the Reporting Limit (RL) and Greater Than or Equal to the Method Detection Limit (MDL)

▲ NHOU Extraction Well

Concentration Contours (µg/L)*
1 3

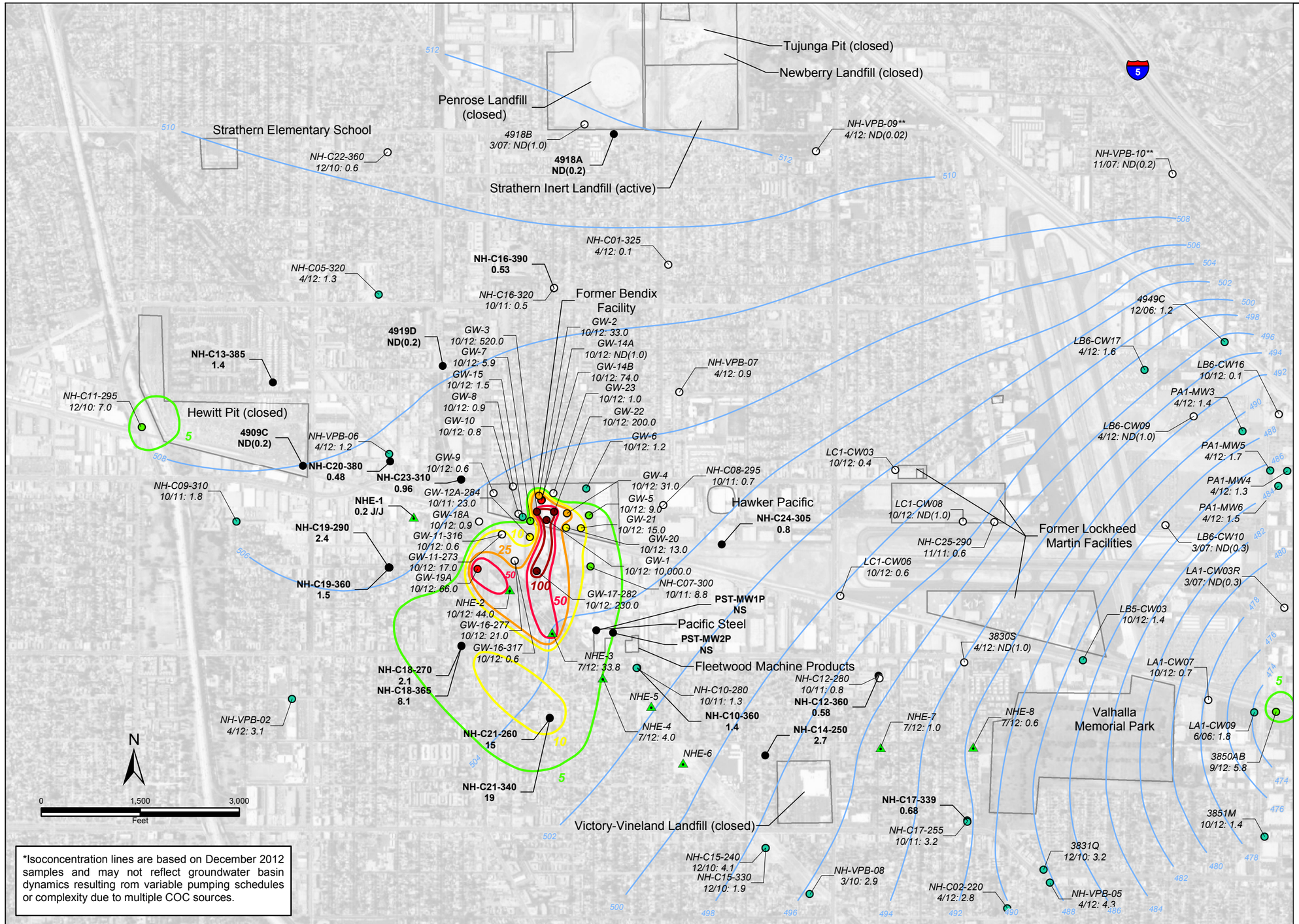
514 Line of Estimated Equal Elevation of Groundwater in Feet Relative to Mean Sea Level

Approximate Boundary San Fernando Valley Investigation Area 1

Aerial Photograph: DigitalGlobe, June 2009

DRAWN: RJP	PROJECT NO: 4088115718	amec	Phase 1 Pre-design Investigation North Hollywood Operable Unit Los Angeles County, California
REV:	SCALE: AS SHOWN		1,4-Dioxane Distribution in B Zone Groundwater First Semiannual Sampling Event December 2012
CHECKED: DCD	APPROVED: MDT		FIGURE 3b
DATE: 7/2013	DATE: 7/2013		

Prepared by: reuben.pillsbury Friday, August 09, 2013 4:57:38 PM
P:\4088\115718_NHOU\GIS\Projects\Phase1\PreDesign_Investigation\12Q4_withCurrentValue\Figure03b_Diox-B.mxd



*Isoconcentration lines are based on December 2012 samples and may not reflect groundwater basin dynamics resulting rom variable pumping schedules or complexity due to multiple COC sources.

EXPLANATION

Chromium VI Concentration
In Micrograms per Liter (µg/L)
Groundwater Monitoring Well
Sampled in A Zone

- <1
- 1 - 5
- 5 - 10
- 10 - 25
- 25 - 50
- 50 - 100
- >100

Monitoring Well Sampled December 2012

1.8 Chromium VI Concentration in Groundwater (µg/L)

Samples not collected in December 2012 indicated in italics.

Recent sampling results are indicated in bold.

Depths of multiple depth-discrete samples are indicated in feet below top of casing.

J Estimated Value.

NHOU Extraction Well

Concentration Contours (µg/L)*
Dashed Where Inferred

- 5
- 10
- 25
- 50
- 100

514 Line of Estimated Equal Elevation of Groundwater December 2012 (Feet NAVD88)

** Anomalous groundwater elevation data not used for contouring.

Approximate Boundary San Fernando Valley Investigation Area 1

Aerial Photograph: DigitalGlobe, June 2009

DRAWN: RJP	PROJECT NO: 4088115718		
REV:	SCALE: AS SHOWN		
CHECKED: DCD	APPROVED: MDT		
DATE: 7/2013	DATE: 7/2013	amec	Phase I Pre-design Investigation North Hollywood Operable Unit Los Angeles County, California

Chromium VI Distribution
in A Zone Groundwater
First Semiannual Sampling Event
December 2012

FIGURE **4a**

Prepared by: reuben.pillsbury Friday, August 09, 2013 4:56:24 PM
P:\4088115718_NHOU\GIS\Projects\PhaseIPreDesign_Investigation\12Q4_withCurrentValueFigure04a_Cr6-A.mxd

Tujunga Pit (closed)

Newberry Landfill (closed)

Penrose Landfill (closed)

NH-C22-460
12/10: 0.1

4918A
ND(0.2)

Strathern Inert Landfill (active)

Strathern Elementary School

NH-C01-450
403.0: ND(0.2)
447.0: ND(0.2)

NH-C05-460
1/10: 0.2

NH-C16-390
0.43

NH-C13-385
1.5

Hewitt Pit (closed)

4909C
392.0: 0.41
398.0: 0.32

NH-C20-380
0.43

NH-C23-400
343.0: 0.42
397.0: 0.45

GW-18B
402.0: 0.39
405.0: 0.41

GW-11-352
10/12: 4.9

GW-12A-349
10/12: 0.5

GW-16-347
10/12: ND(1.0)

NH-C19-360
1.4

GW-19B
401.5: 0.55
405.5: 0.55

Former Bendix Facility

Hawker Pacific

NH-C24-410
11/11: 0.5

LC1-CW02
10/12: ND(1.0)

LB6-CW08
4/12: ND(1.0)

LB6-CW14
4/12: ND(1.0)

Former Lockheed Martin Facilities

LC1-CW05
10/12: ND(1.0)

LB5-CW02
10/12: ND(1.0)

Pacific Steel

Fleetwood Machine Products

NH-C03-380
4/12: 2.7

NH-C18-365
6.8

NH-C10-360
1.4

NH-C12-360
0.51 U/J-

NH-C21-340
21

10

5

LA1-CW05
339.0: 0.3
356.0: 0.26

Valhalla Memorial Park

NHE-6
3.2
3/12

NH-C17-339
0.72

3851N
12/04: 0.5

NH-C02-325
4/12: 1.1

Victory-Vineland Landfill (closed)

512 510 508 506 504 502 500 498 496 494 492 490 488 486 484 482 480 478

N

0 1,500 3,000
Feet

*Isoconcentration lines are based on December 2012 samples and may not reflect groundwater basin dynamics resulting rom variable pumping schedules or complexity due to multiple COC sources.

EXPLANATION

Chromium VI Concentration
In Micrograms per Liter (µg/L)
Groundwater Monitoring Well
Sampled in B Zone

- <1
- >5
- 1 - 5
- Monitoring Well Sampled December 2012
- 0.5 Chromium VI Concentration in Groundwater (µg/L)
- Samples not collected in December 2012 indicated in italics.
- Recent sampling results are indicated in bold.
- Depths of multiple depth-discrete samples are indicated in feet below top of casing.
- J Estimated Value
- NHOU Extraction Well

Concentration Contours (µg/L)*
Dashed Where Inferred

- 5
- 10
- 514 Line of Estimated Equal Elevation of Groundwater in Feet Relative to Mean Sea Level
- Approximate Boundary San Fernando Valley Investigation Area 1

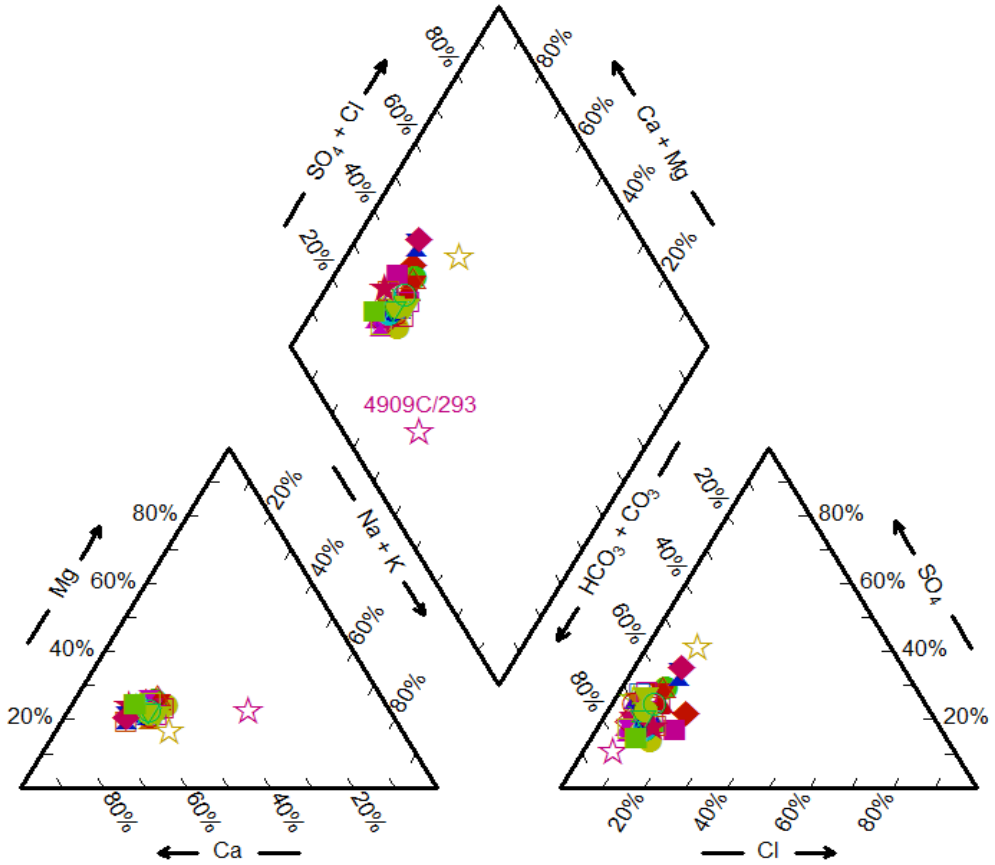
Aerial Photograph: DigitalGlobe, June 2009

DRAWN: RJP	PROJECT NO: 4088115718	amec	Phase 1 Pre-design Investigation North Hollywood Operable Unit Los Angeles County, California
REV:	SCALE: AS SHOWN		Chromium VI Distribution in B Zone Groundwater First Semiannual Sampling Event December 2012
CHECKED: DCD	APPROVED: MDT		FIGURE **4b**
DATE: 7/2013	DATE: 7/2013		

Prepared by: reuben.pillsbury Friday, August 09, 2013 4:56:58 PM
P:\4088\115718_NHOU\GIS\Projects\Phase1PreDesign_Investigation\12Q4_withCurrentValue\Figure04b_Cr6-B.mxd

ATTACHMENT A

Inorganic Groundwater Parameters



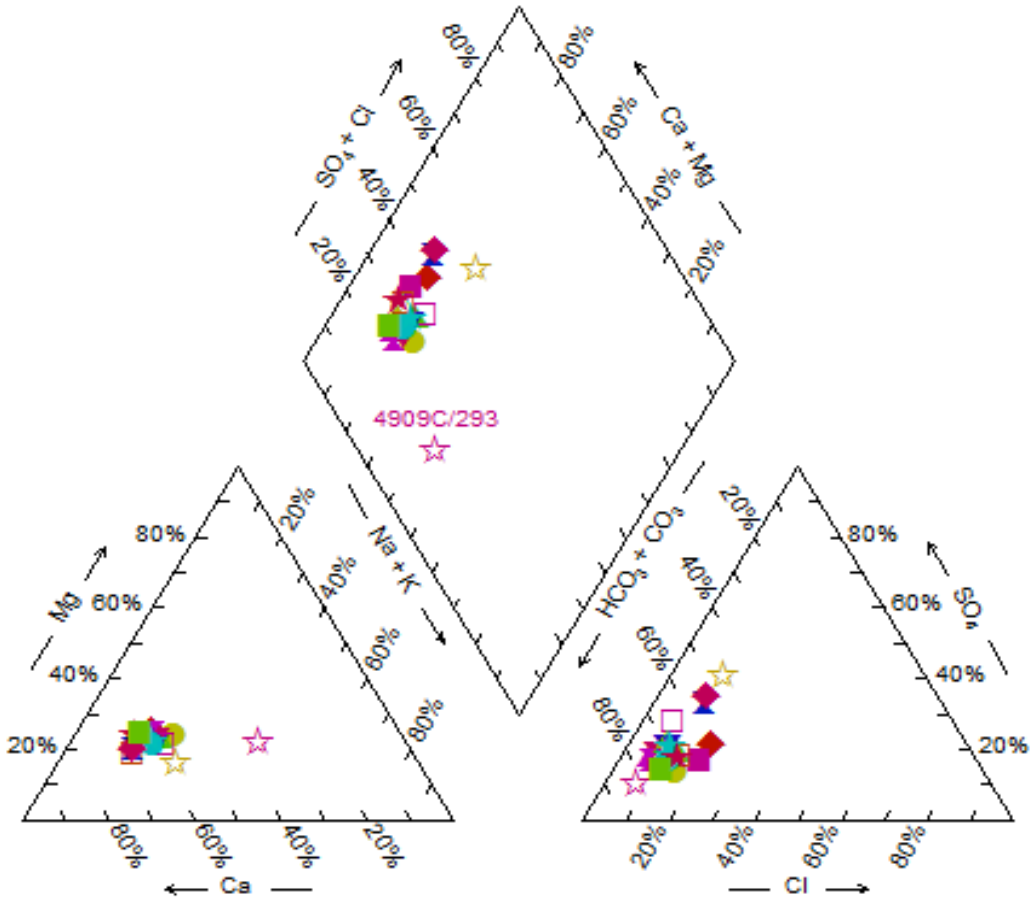
Legend

- 4909C/392
- 4909C/398
- 4918A/297.5
- 4918A/483
- 4919D/295
- LA1CW05/3...
- LA1CW05/3...
- GB18B/402
- GW18B/405
- G18B/405/D...
- G19B/405.5
- GW19B/401.5
- GW19B/401....
- NHE1/240
- NHC01/450/...
- NHC01/450/...
- NHC01/450/...
- NHC10/360/...
- NHC10/360/...
- NHC12/360/...
- NHC12/360/...
- NHC13/385/...
- NHC13/385/...
- NHC14/250/...
- NHC16/390/...
- NHC16/390/...

17 More...

INORGANIC GROUNDWATER PARAMETERS
A AND B ZONE WELLS
Phase I Pre-Design INvestigation
NHOU Second Interim Remedy

By: DAH	Date: 08/09/13	Project No.: 162830
amec		Figure **A-1**

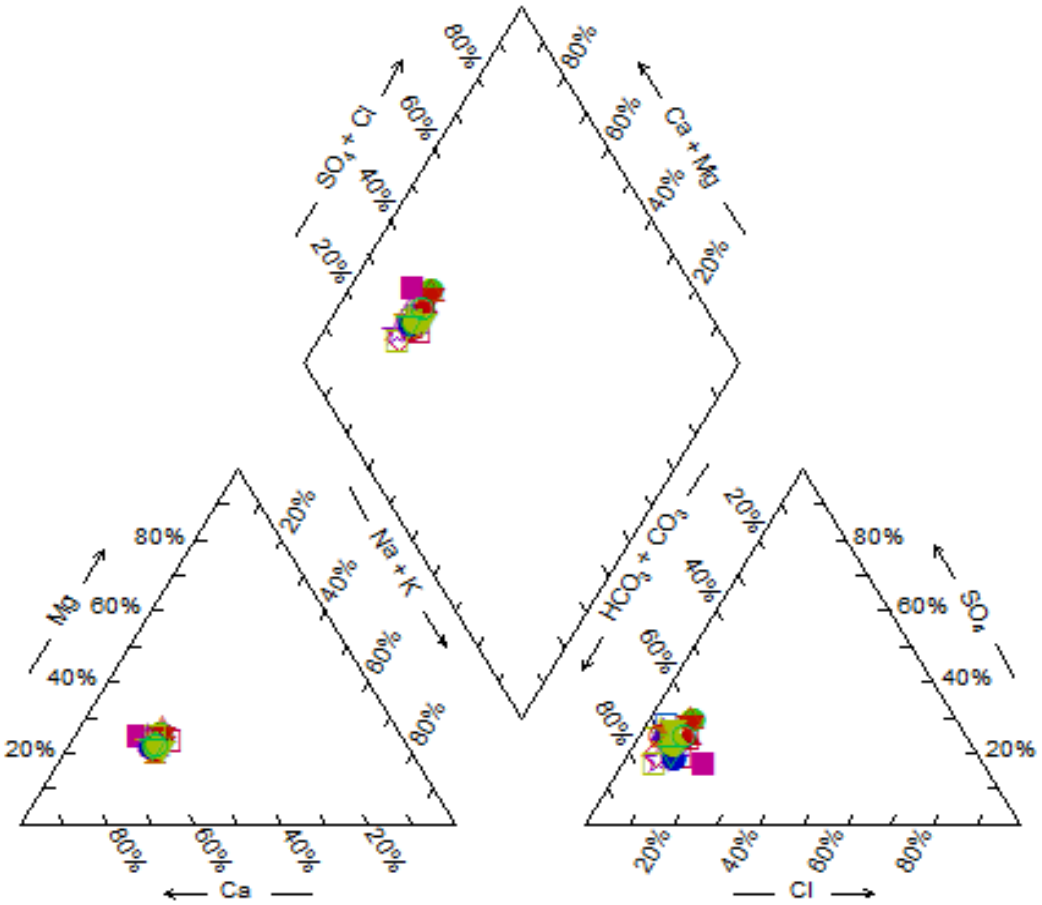


Legend

- 4918A/297.5
- 4919D/295
- NHE1/240
- NHC01/450...
- NHC10/360...
- NHC12/360...
- NHC13/385...
- NHC14/250...
- NHC16/390...
- NHC17/339...
- NHC18/270...
- NHC18/365...
- NHC19/290...
- NH19/360/...
- NHC20/380...
- NHC21/260...
- NHC21/260...
- 4909C/293
- NHC23/310...
- NHC24/305...

INORGANIC GROUNDWATER PARAMETERS
A ZONE WELLS
Phase I Pre-Design INvestigation
NHOU Second Interim Remedy

By: DAH	Date: 08/09/13	Project No.: 162830
amec		Figure **A-2**



Legend

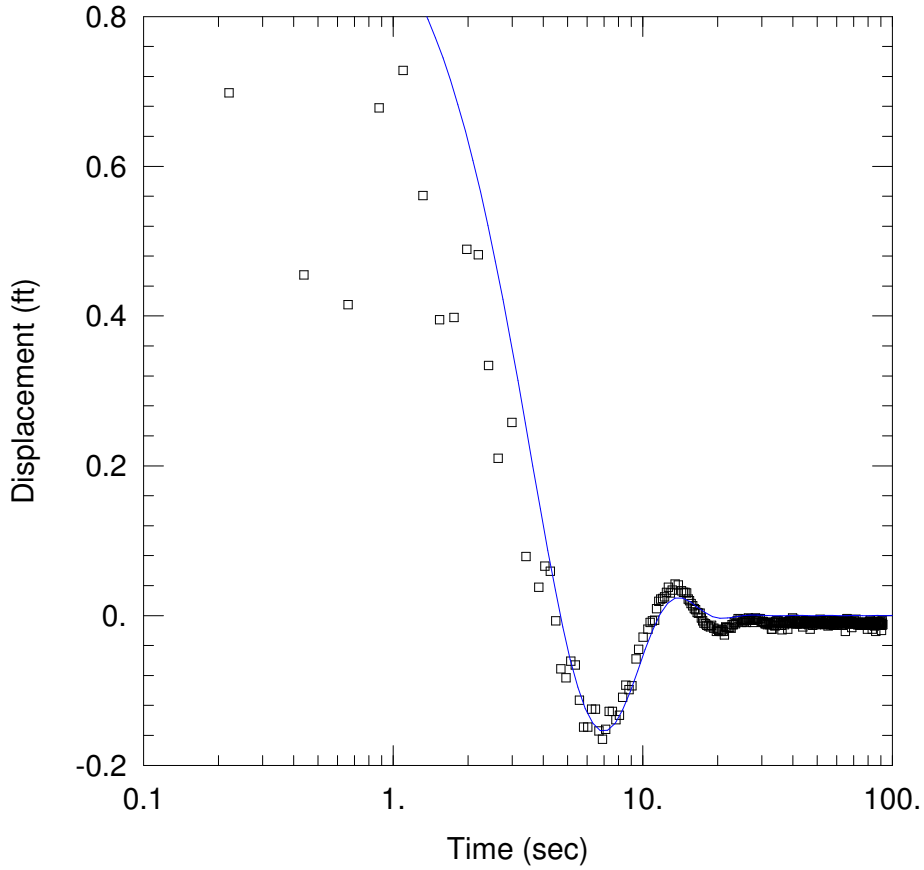
- 4909C/392
- 4909C/398
- 4918A/483
- LA1CW05/...
- LA1CW05/...
- GB18B/402
- GW18B/405
- G18B/405/...
- G19B/405.5
- GW19B/40...
- GW19B/40...
- NHC01/450...
- NHC01/450...
- NHC10/360...
- NHC12/360...
- NHC13/385...
- NHC14/250...
- NHC16/390...
- NHC17/339...
- NHC18/365...
- NHC19/360...
- NHC20/380...
- NHC23/400...
- NH23/400/...

INORGANIC GROUNDWATER PARAMETERS
B ZONE WELLS
Phase I Pre-Design INvestigation
NHOU Second Interim Remedy

By: DAH	Date: 08/09/13	Project No.: 162830
amec		Figure **A-3**

ATTACHMENT B

Pneumatic Slug Test Curves



WELL TEST ANALYSIS

Data Set: C:\...\NH-C01-450-10psi-1.aqt
Date: 03/11/13 Time: 10:49:57

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C01-450 Well screened in the B Zone
Test Date: 12/3/13

AQUIFER DATA

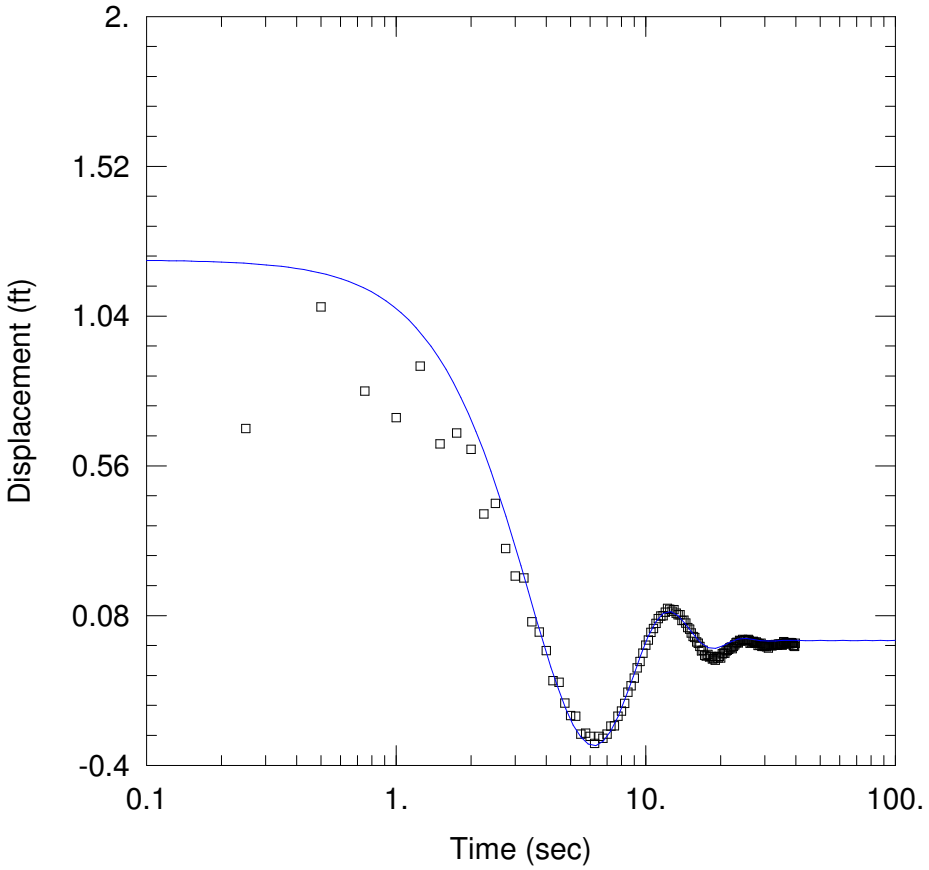
Saturated Thickness: 175.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C01-450)

Initial Displacement: 0.993 ft
Total Well Penetration Depth: 175.8 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 175.8 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 61.33 ft/day
Le = 117.8 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C01-450-15psi-2.aqt
Date: 03/11/13 Time: 10:49:49

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C01-450 Well screened in the B Zone
Test Date: 12/3/13

AQUIFER DATA

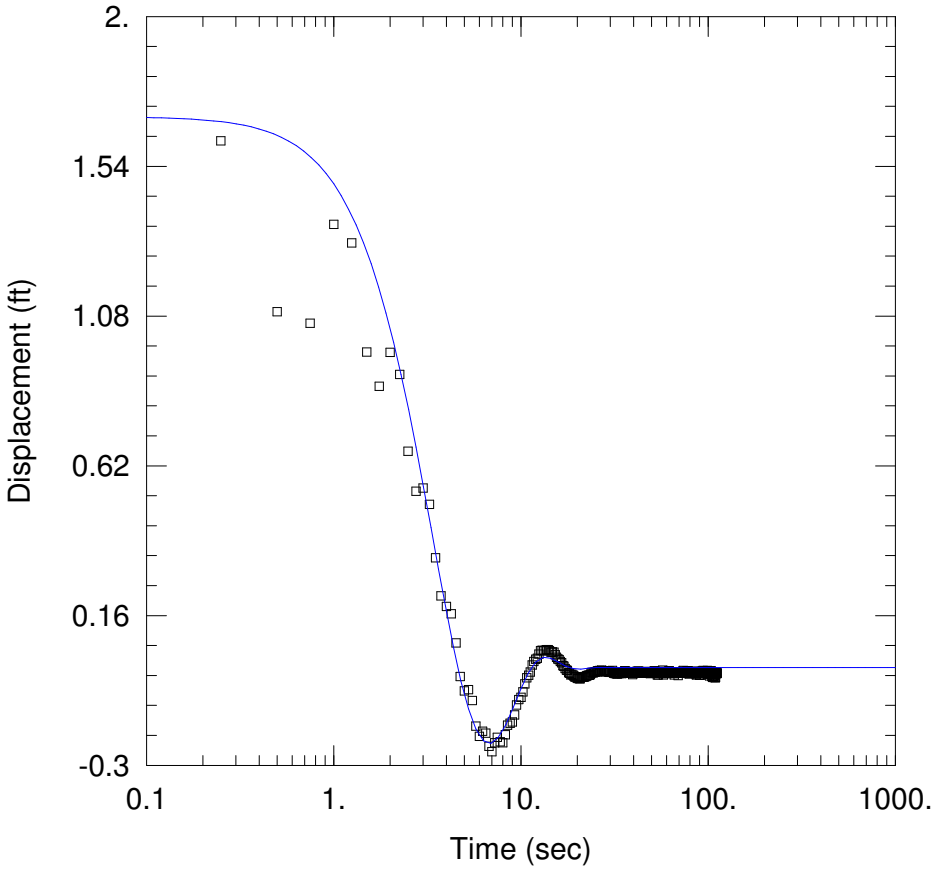
Saturated Thickness: 175.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C01-450)

Initial Displacement: 1.22 ft
Total Well Penetration Depth: 175.8 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 175.8 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 86.63 ft/day
Le = 107.4 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C01-450-20psi-1.aqt
Date: 03/11/13 Time: 10:49:40

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C01-450 Well screened in the B Zone
Test Date: 12/3/13

AQUIFER DATA

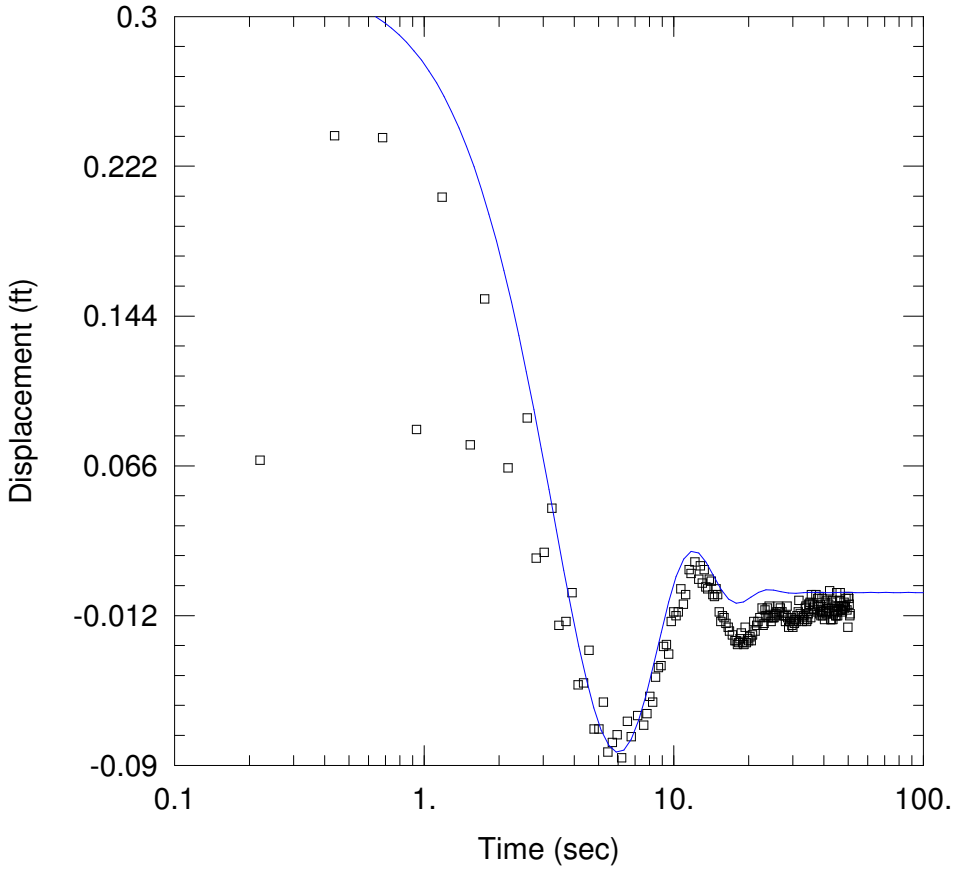
Saturated Thickness: 175.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C01-450)

Initial Displacement: 1.692 ft
Total Well Penetration Depth: 175.8 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 175.8 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 61.33 ft/day
Le = 107.4 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C02-325-2psi-1.aqt
Date: 03/11/13 Time: 10:49:33

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C02-325 Well screened in the B Zone
Test Date: 12/4/13

AQUIFER DATA

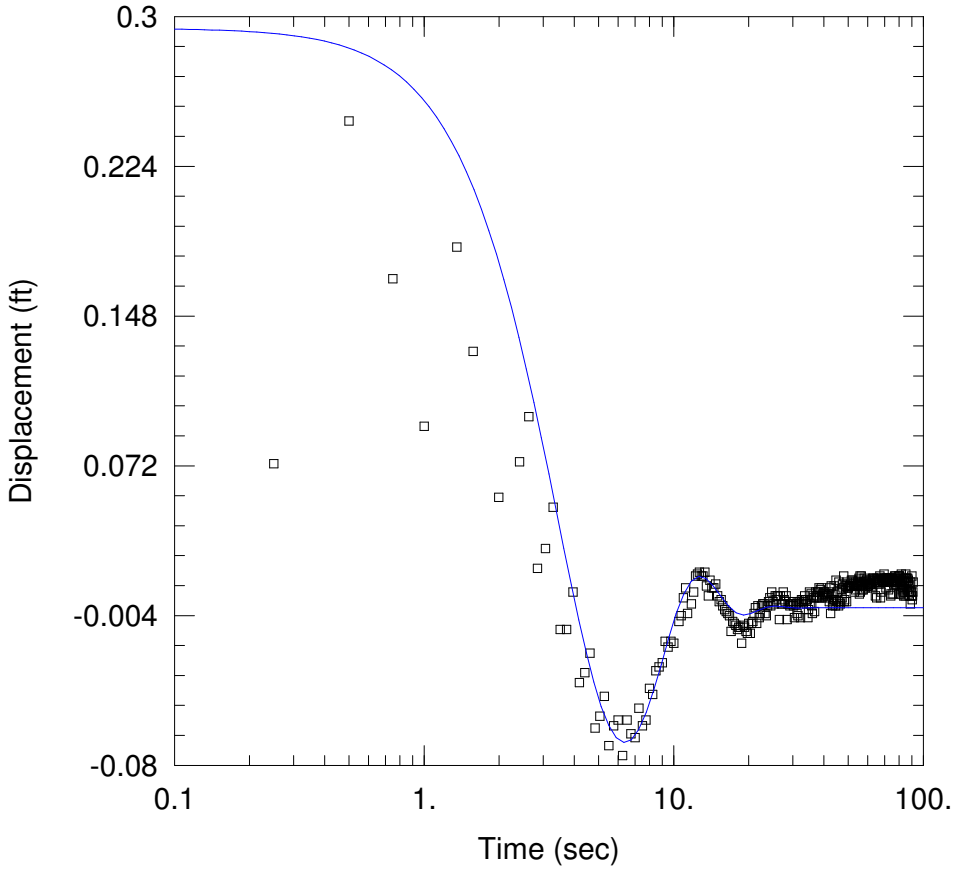
Saturated Thickness: 155.9 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C02-325)

Initial Displacement: 0.319 ft
Total Well Penetration Depth: 155.9 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 155.9 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 85.35 ft/day
Le = 99.35 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C02-325-2psi-2.aqt
Date: 03/11/13 Time: 10:49:26

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C02-325 Well screened in the B Zone
Test Date: 12/4/13

AQUIFER DATA

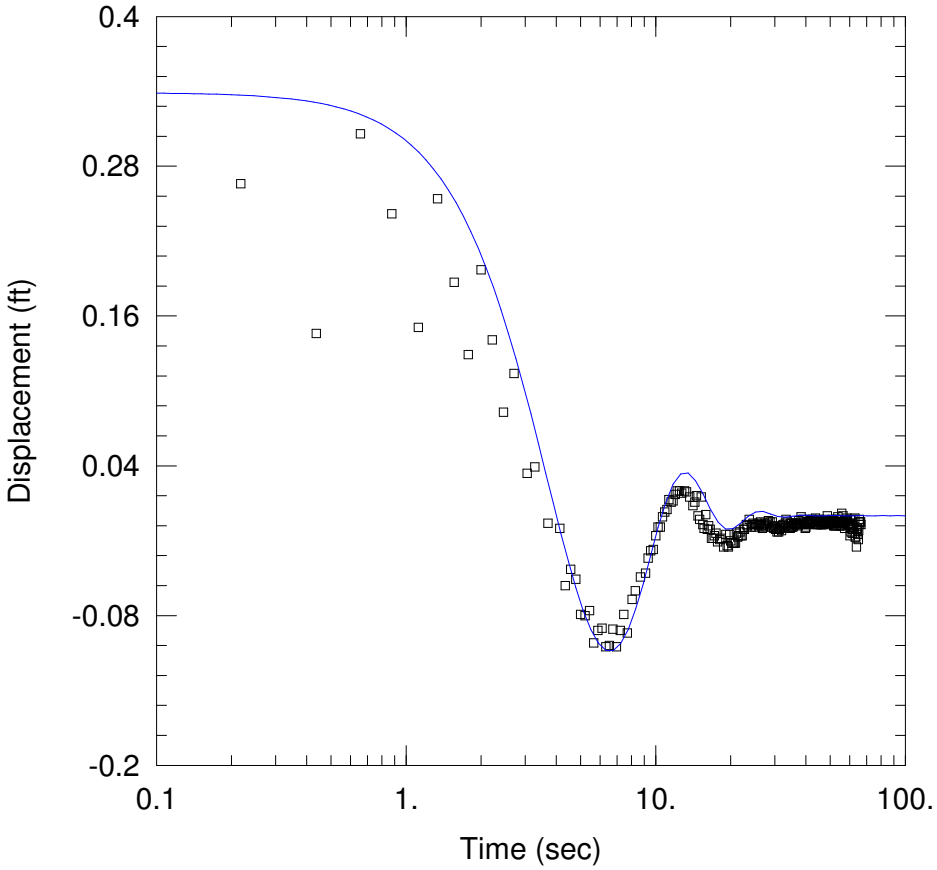
Saturated Thickness: 155.9 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C02-325)

Initial Displacement: 0.294 ft
Total Well Penetration Depth: 155.9 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 155.9 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 76.07 ft/day
Le = 108.9 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C02-325-5psi-1.aqt
Date: 03/11/13 Time: 10:49:18

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C02-325 Well screened in the B Zone
Test Date: 12/4/13

AQUIFER DATA

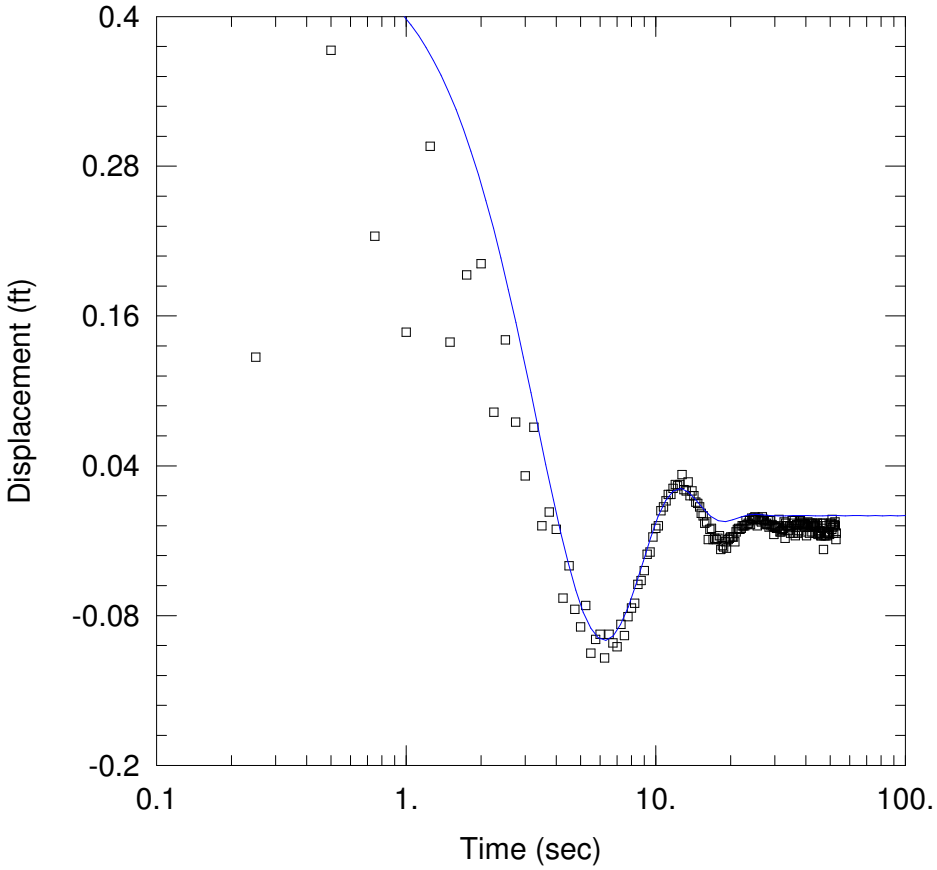
Saturated Thickness: 153.9 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C02-325)

Initial Displacement: 0.339 ft
Total Well Penetration Depth: 155.9 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 155.9 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 88.26 ft/day
Le = 123.8 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C02-325-5psi-2.aqt
Date: 03/11/13 Time: 10:49:10

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C02-325 Well screened in the B Zone
Test Date: 12/4/13

AQUIFER DATA

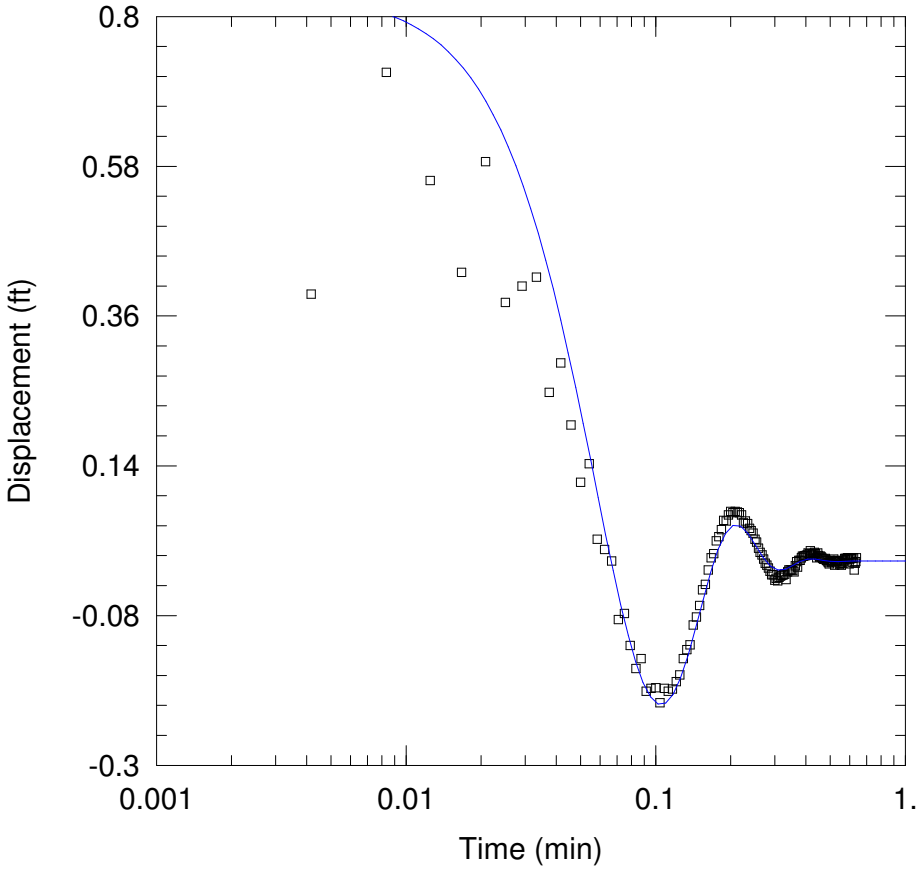
Saturated Thickness: 155.9 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C02-325)

Initial Displacement: 0.458 ft
Total Well Penetration Depth: 155.9 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 155.9 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 75.5 ft/day
Le = 103. ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C02-325-10psi-1.aqt
Date: 03/11/13 Time: 10:49:03

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C02-325 Well screened in the B Zone
Test Date: 12/4/13

AQUIFER DATA

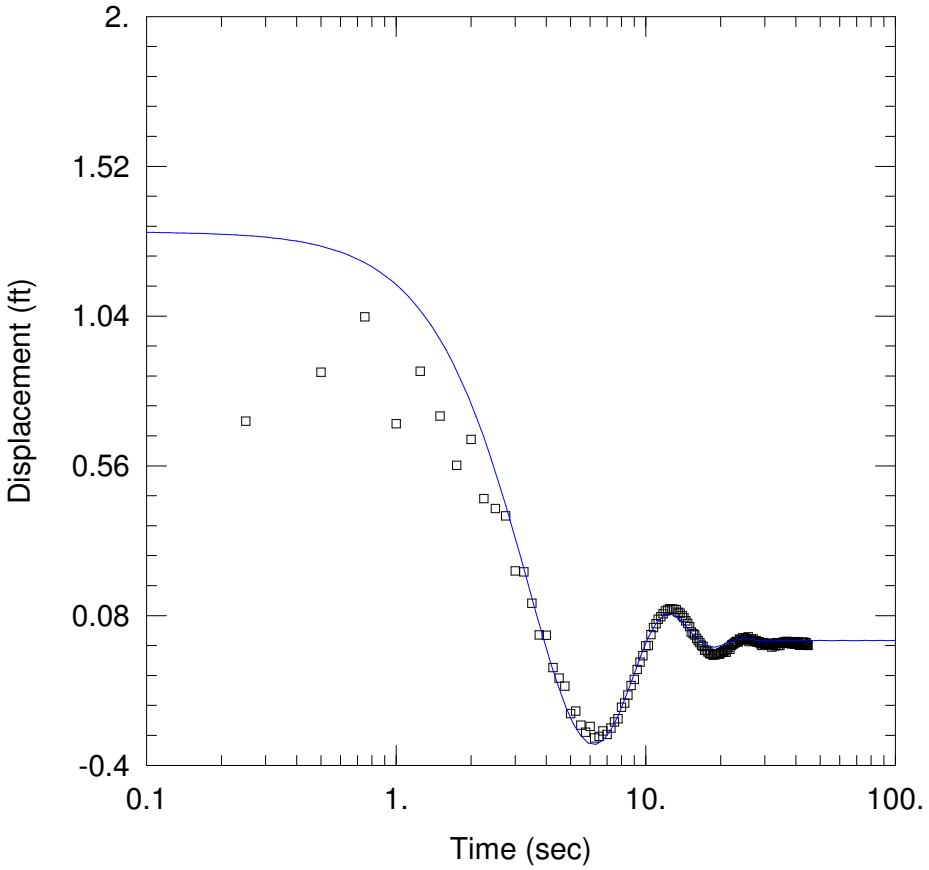
Saturated Thickness: 155.9 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C02-325)

Initial Displacement: 0.832 ft
Total Well Penetration Depth: 155.9 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 155.9 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 79.99 ft/day
Le = 108.9 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C02-325-15psi-1.aqt
Date: 03/11/13 Time: 10:48:56

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C02-325 Well screened in the B Zone
Test Date: 12/4/13

AQUIFER DATA

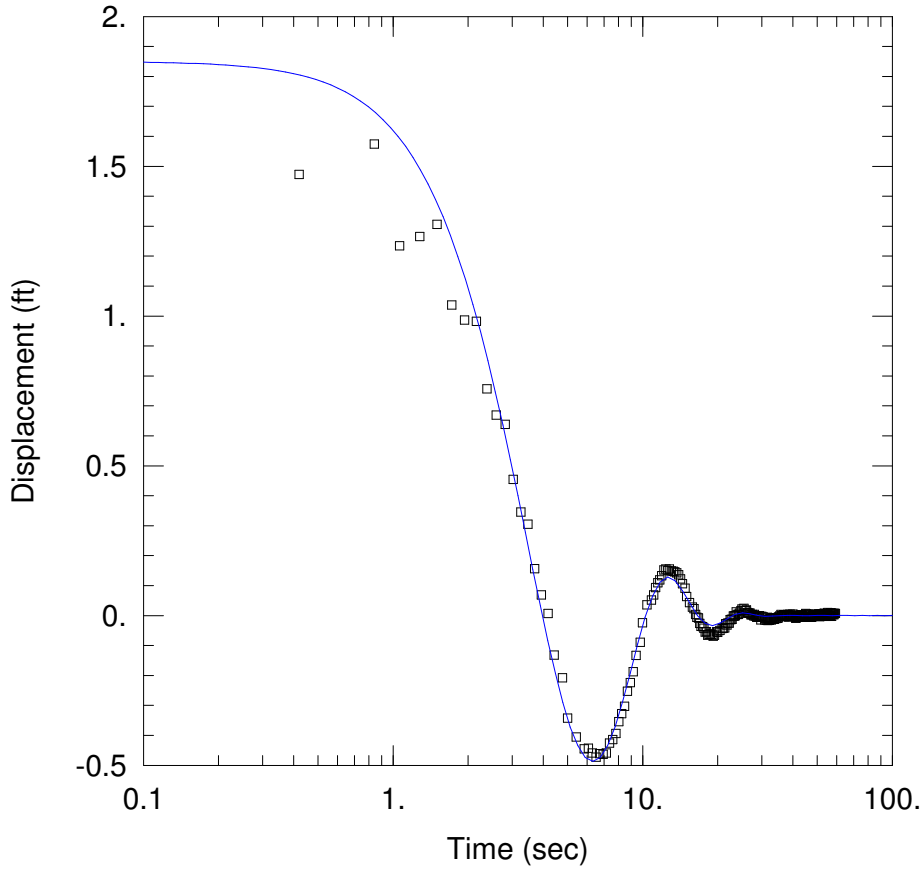
Saturated Thickness: 155.9 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C02-325)

Initial Displacement: 1.31 ft
Total Well Penetration Depth: 155.9 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 155.9 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 81.52 ft/day
Le = 105.6 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C02-325-25psi-1.aqt
Date: 03/11/13 Time: 10:48:45

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C02-325 Well screened in the B Zone
Test Date: 12/4/13

AQUIFER DATA

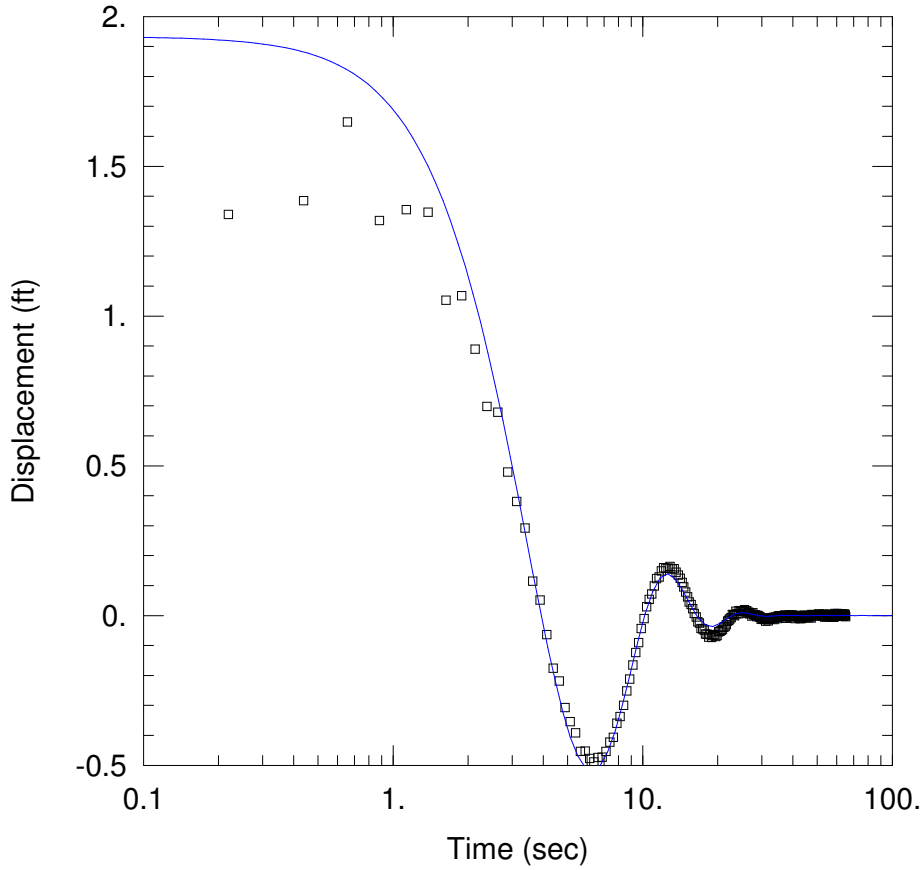
Saturated Thickness: 155.9 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C02-325)

Initial Displacement: 1.85 ft
Total Well Penetration Depth: 155.9 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 155.9 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 81.47 ft/day
Le = 110.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C02-325-25psi-2.aqt
Date: 03/11/13 Time: 10:48:36

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C02-325 Well screened in the B Zone
Test Date: 12/4/13

AQUIFER DATA

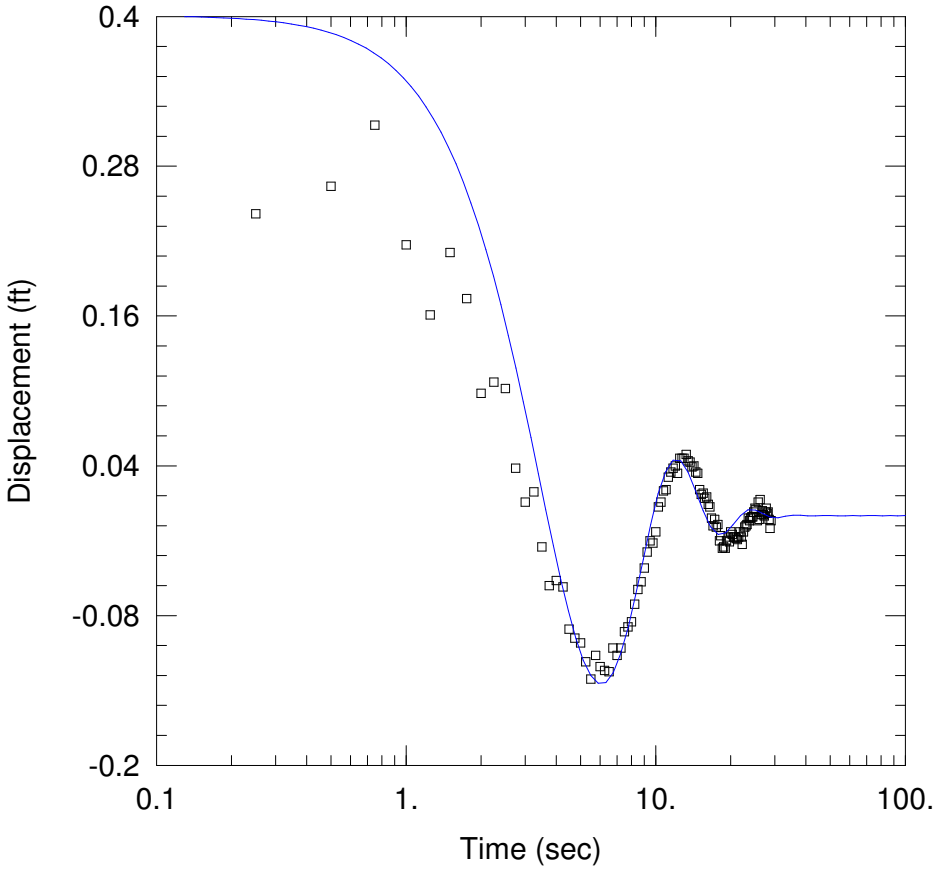
Saturated Thickness: 155.9 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C02-325)

Initial Displacement: 1.933 ft
Total Well Penetration Depth: 155.9 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 155.9 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 82.9 ft/day
Le = 108.9 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C03-380-5psi.aqt
Date: 03/11/13 Time: 10:37:14

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C03-380 Well screened in the B Zone
Test Date: 1/29/13

AQUIFER DATA

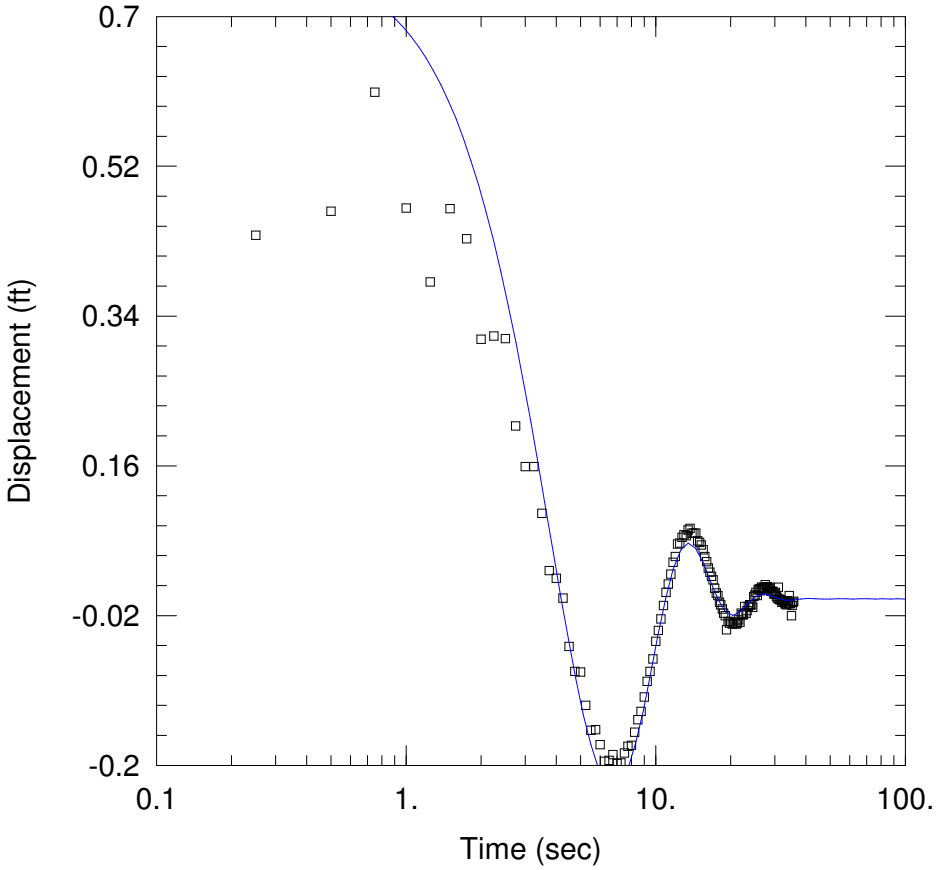
Saturated Thickness: 173.3 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C03-380)

Initial Displacement: 0.401 ft
Total Well Penetration Depth: 173.3 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 173.3 ft
Screen Length: 40. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 123.9 ft/day
Le = 106.7 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C03-380-10psi.aqt
Date: 03/11/13 Time: 10:38:12

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C03-380 Well screened in the B Zone
Test Date: 1/29/13

AQUIFER DATA

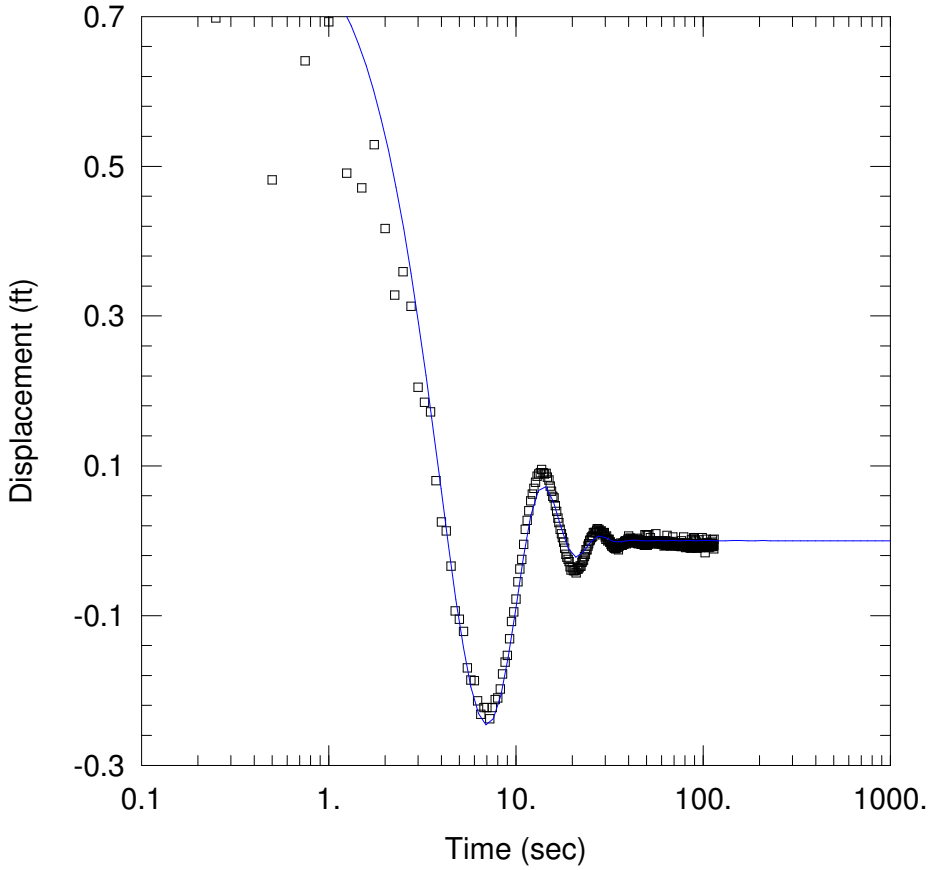
Saturated Thickness: 173.3 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C03-380)

Initial Displacement: 0.766 ft
Total Well Penetration Depth: 173.3 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 173.3 ft
Screen Length: 40. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 101.5 ft/day
Le = 130. ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C03-380-10psi-2.aqt
Date: 03/11/13 Time: 10:39:49

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C03-380 Well screened in the B Zone
Test Date: 1/29/13

AQUIFER DATA

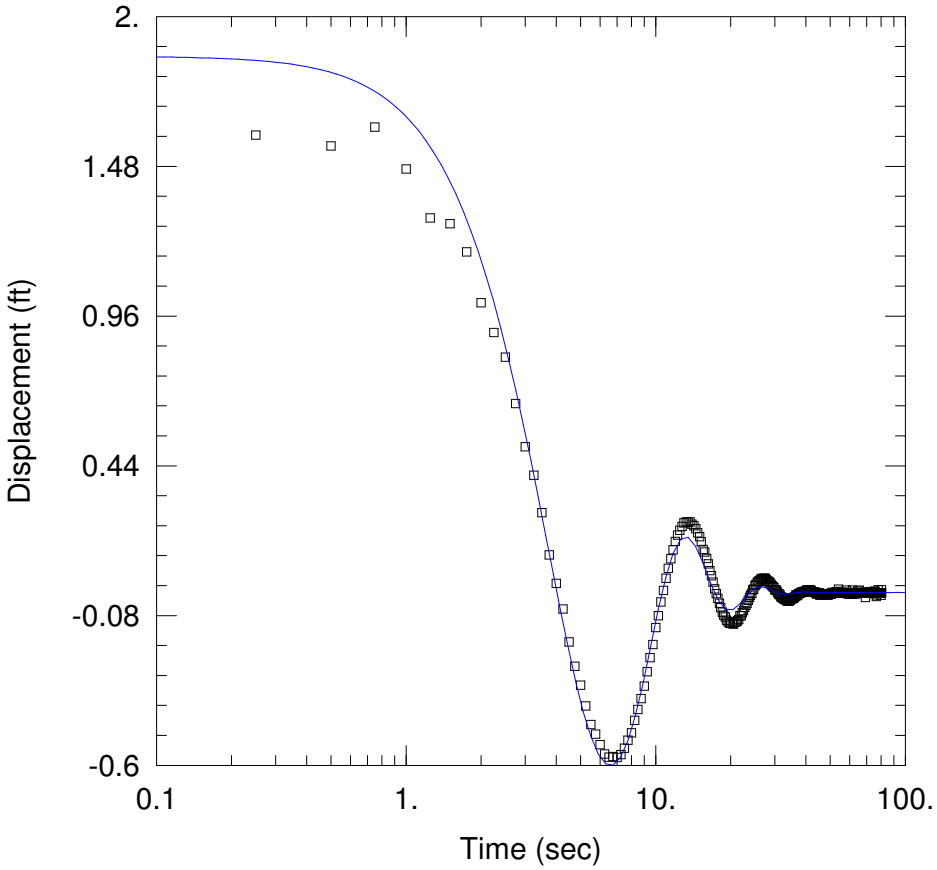
Saturated Thickness: 173.3 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C03-380)

Initial Displacement: 0.826 ft
Total Well Penetration Depth: 173.3 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 173.3 ft
Screen Length: 40. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 98.39 ft/day
Le = 139.8 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C03-380-30psi.aqt
Date: 03/11/13 Time: 10:40:02

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C03-380 Well screened in the B Zone
Test Date: 1/29/13

AQUIFER DATA

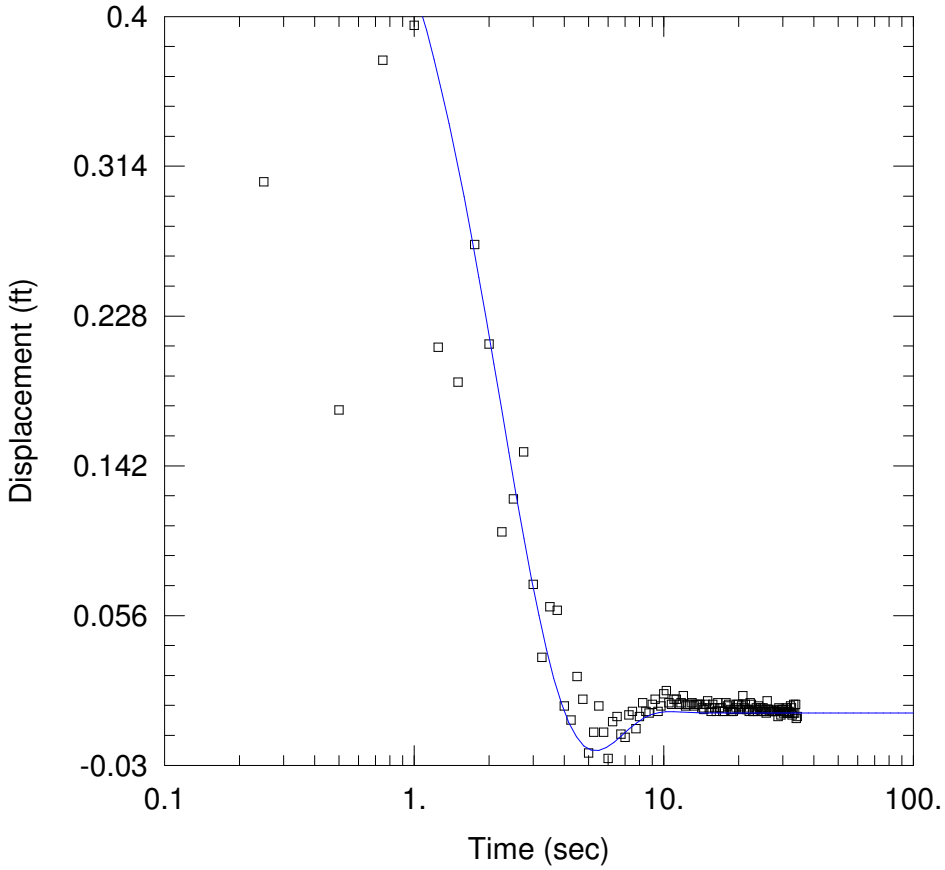
Saturated Thickness: 173.3 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C03-380)

Initial Displacement: 1.862 ft
Total Well Penetration Depth: 173.3 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 173.3 ft
Screen Length: 40. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 110.4 ft/day
Le = 125.5 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C09-310-5psi.aqt
Date: 03/11/13 Time: 10:40:12

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C09-310 Well screened in the A Zone
Test Date: 1/29/13

AQUIFER DATA

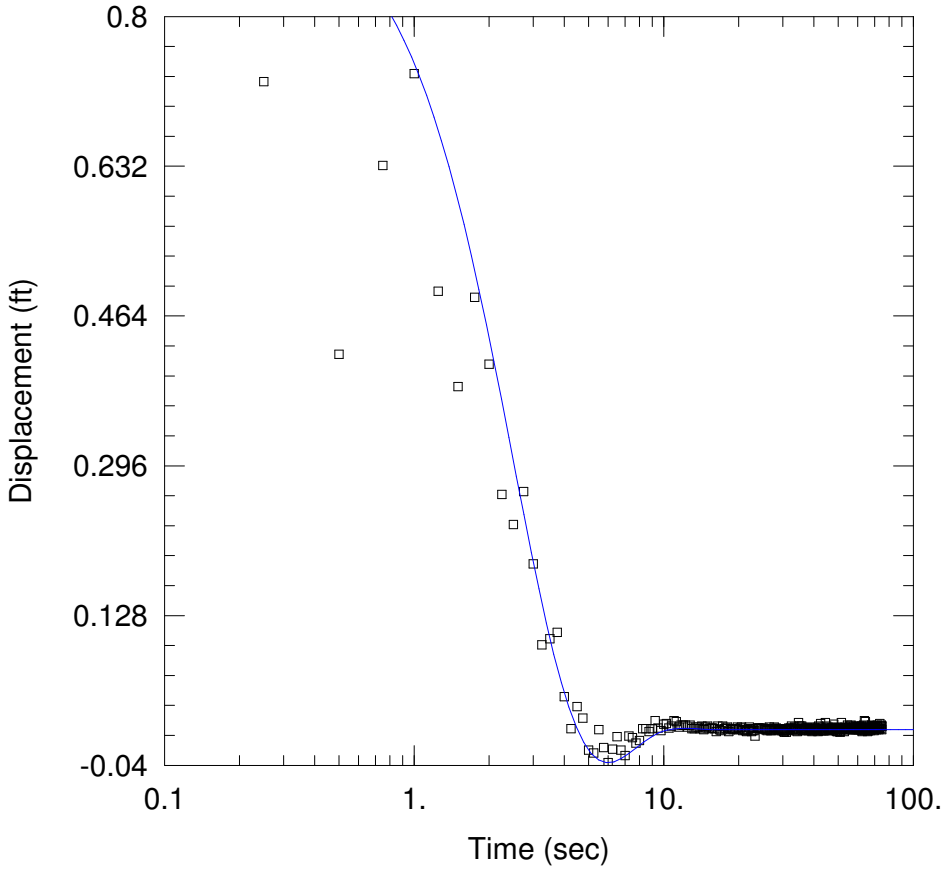
Saturated Thickness: 99.28 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C09-310)

Initial Displacement: 0.544 ft
Total Well Penetration Depth: 79.45 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 79.45 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 48.71 ft/day
Le = 45.25 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C09-310-10psi.aqt
Date: 03/11/13 Time: 10:40:45

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C09-310 □ □□□□r□□□□d □□ □□□ A □□□□
Test Date: 1/29/13

AQUIFER DATA

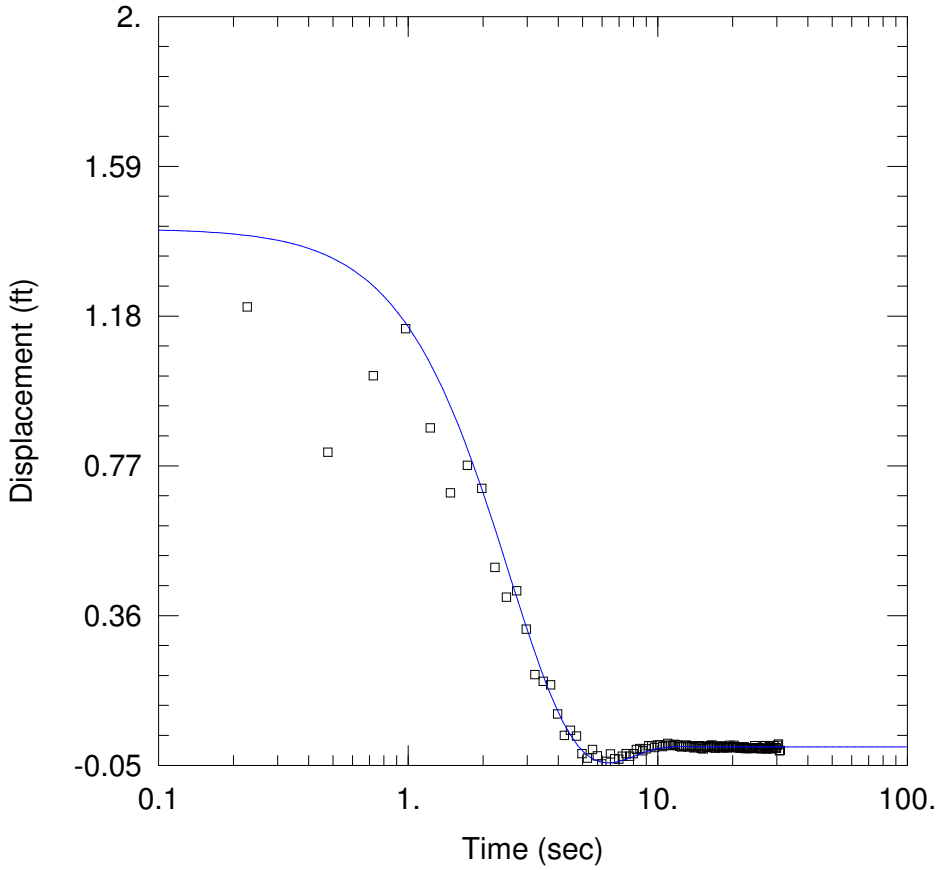
Saturated Thickness: 99.28 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C09-310)

Initial Displacement: 0.929 ft
Total Well Penetration Depth: 79.45 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 79.45 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 43.42 ft/day
Le = 56.97 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C09-310-20psi.aqt
Date: 03/11/13 Time: 10:40:54

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C09-310
Test Date: 1/29/13

AQUIFER DATA

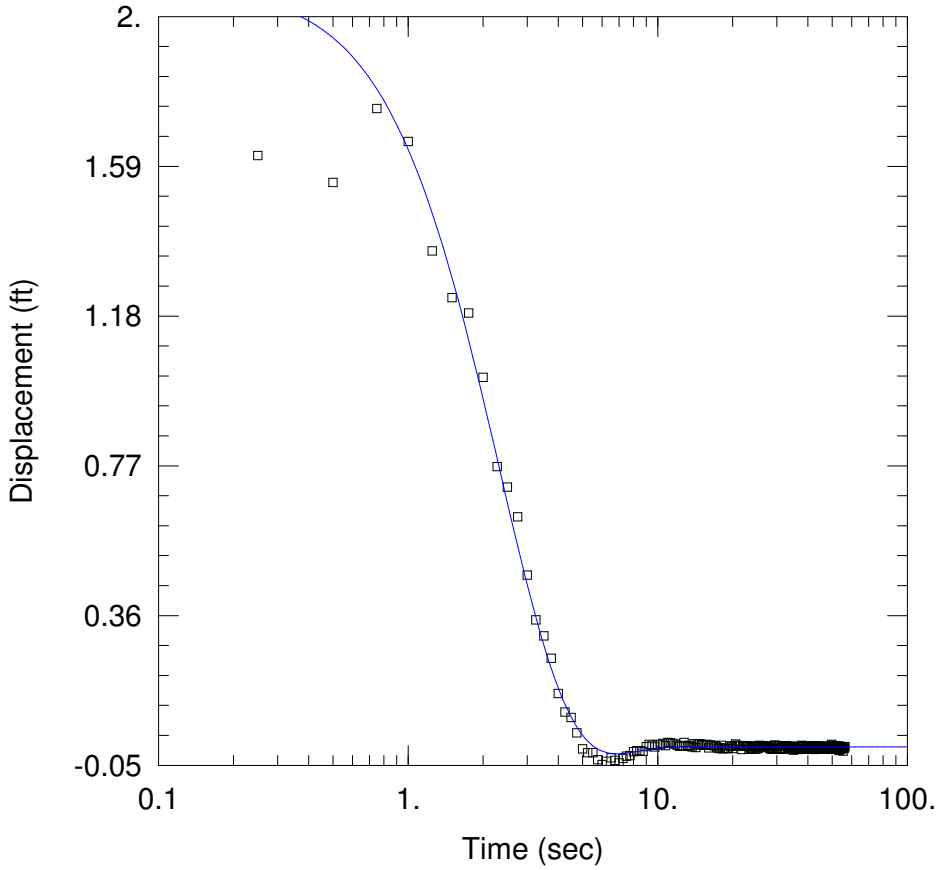
Saturated Thickness: 99.28 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C09-310)

Initial Displacement: 1.419 ft
Total Well Penetration Depth: 79.45 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 79.45 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 41.34 ft/day
Le = 58.41 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C09-310-30psi.aqt
Date: 03/11/13 Time: 10:41:04

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C09-310 □ □□□□r□□□□d □□ □□□ A □□□□
Test Date: 1/29/13

AQUIFER DATA

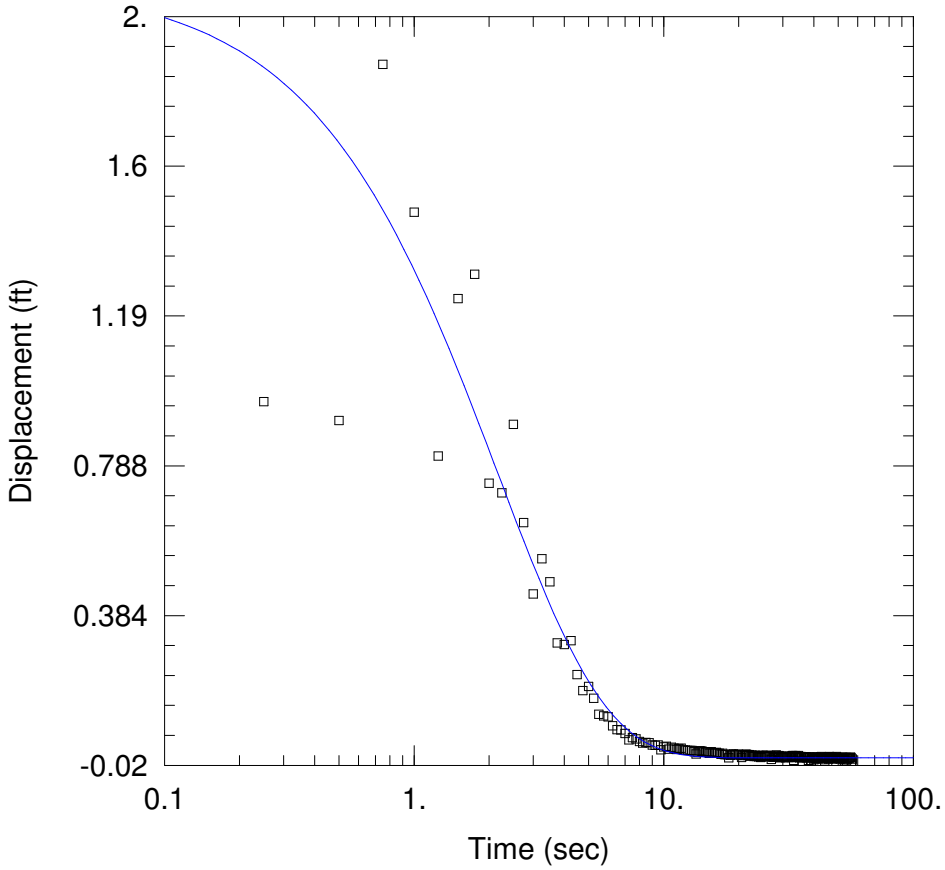
Saturated Thickness: 99.28 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C09-310)

Initial Displacement: 2.082 ft
Total Well Penetration Depth: 79.45 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 79.45 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 40.91 ft/day
Le = 47.59 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C10-280-5psi.aqt
Date: 03/11/13 Time: 10:41:13

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C10-280 □ □□□□r□□□□d □□ □□□ A □□□□
Test Date: 1/29/13

AQUIFER DATA

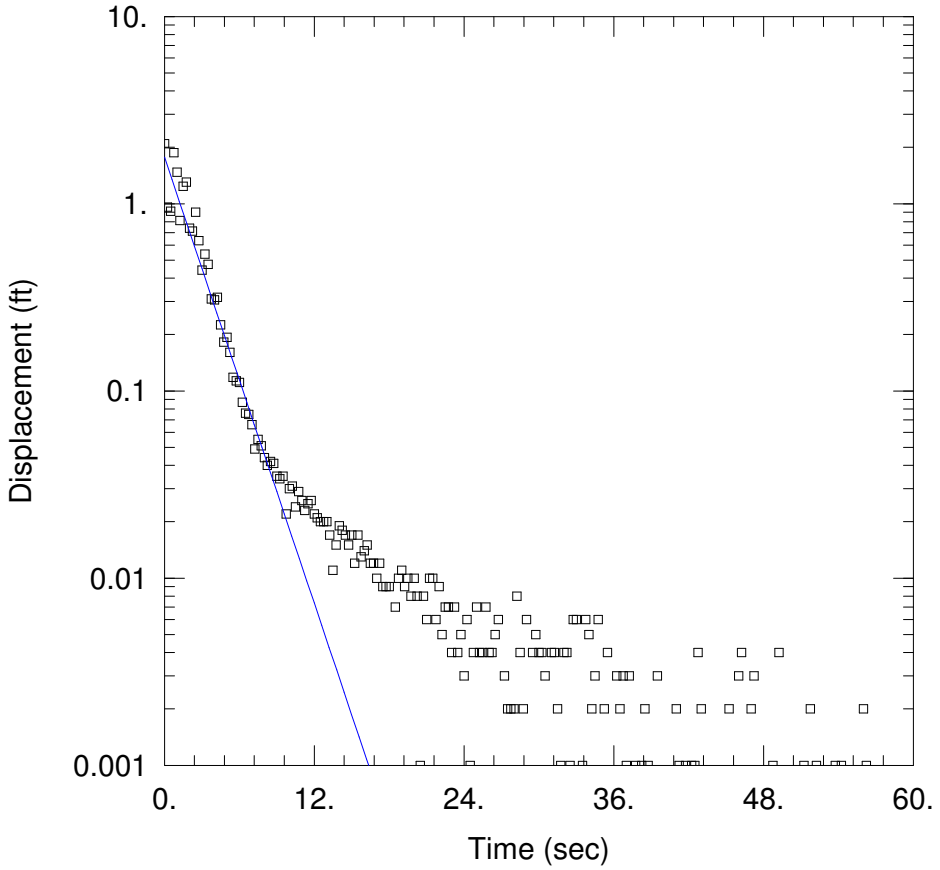
Saturated Thickness: 113.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C10-280)

Initial Displacement: 2.09 ft
Total Well Penetration Depth: 73.06 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 73.06 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 37.18 ft/day
Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C10-280-5psi_BR.aqt
Date: 03/11/13 Time: 10:41:23

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C10-280 □ □□□□r□□□□d □□ □□□ A □□□□
Test Date: 1/29/13

AQUIFER DATA

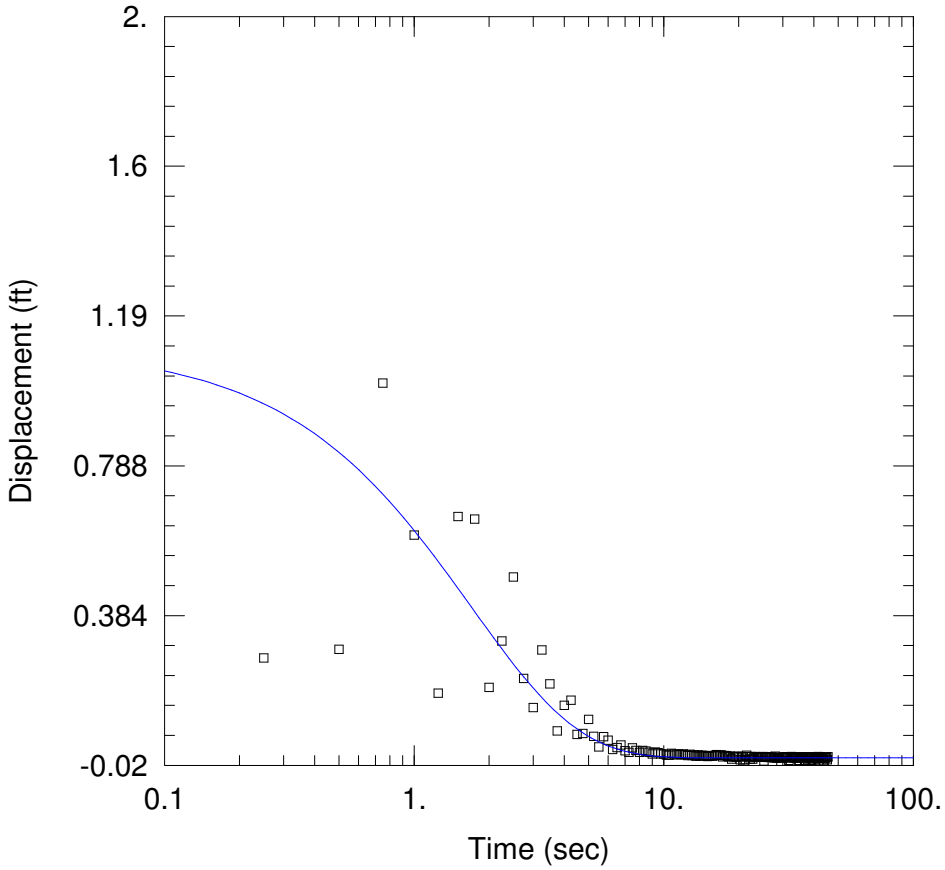
Saturated Thickness: 113.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C10-280)

Initial Displacement: 2.09 ft
Total Well Penetration Depth: 73.06 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 73.06 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 36.73 ft/day
y0 = 1.776 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C10-280-10psi.aqt
Date: 03/11/13 Time: 10:41:32

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C10-280 □ □□□□r□□□□d □□ □□□ A □□□□
Test Date: 1/29/13

AQUIFER DATA

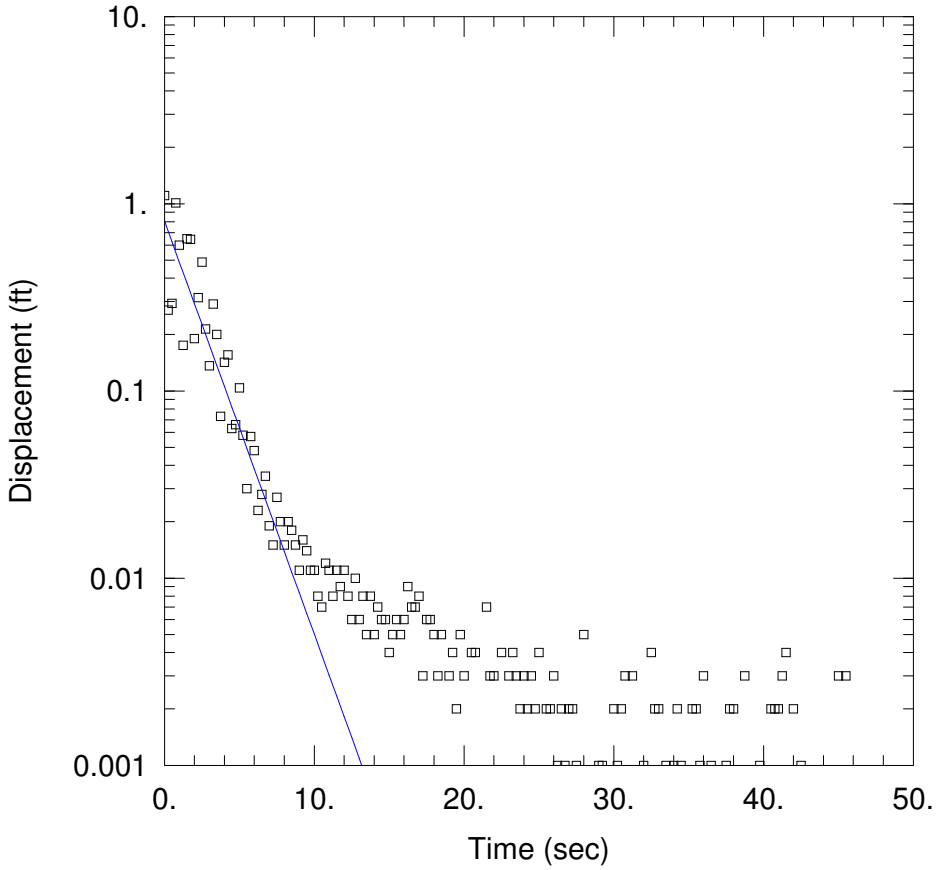
Saturated Thickness: 113.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C10-280)

Initial Displacement: 1.106 ft
Total Well Penetration Depth: 73.06 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 73.06 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 47.4 ft/day
Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C10-280-10psi_BR.aqt
Date: 03/11/13 Time: 10:41:41

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C10-280 □ □□□□r□□□□d □□ □□□ A □□□□
Test Date: 1/29/13

AQUIFER DATA

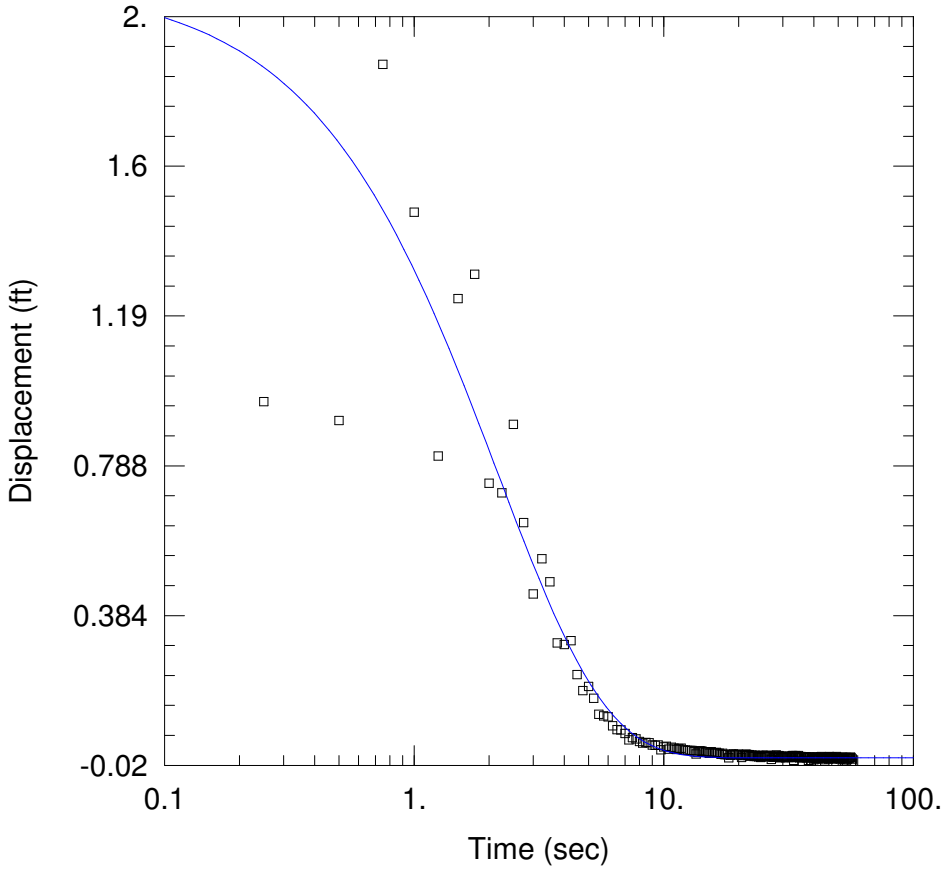
Saturated Thickness: 113.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C10-280)

Initial Displacement: 1.106 ft
Total Well Penetration Depth: 73.06 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 73.06 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 40.81 ft/day
y0 = 0.8078 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C10-280-25psi.aqt
Date: 03/11/13 Time: 10:41:49

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C10-280 □ □□□□r□□□□d □□ □□□ A □□□□
Test Date: 1/29/13

AQUIFER DATA

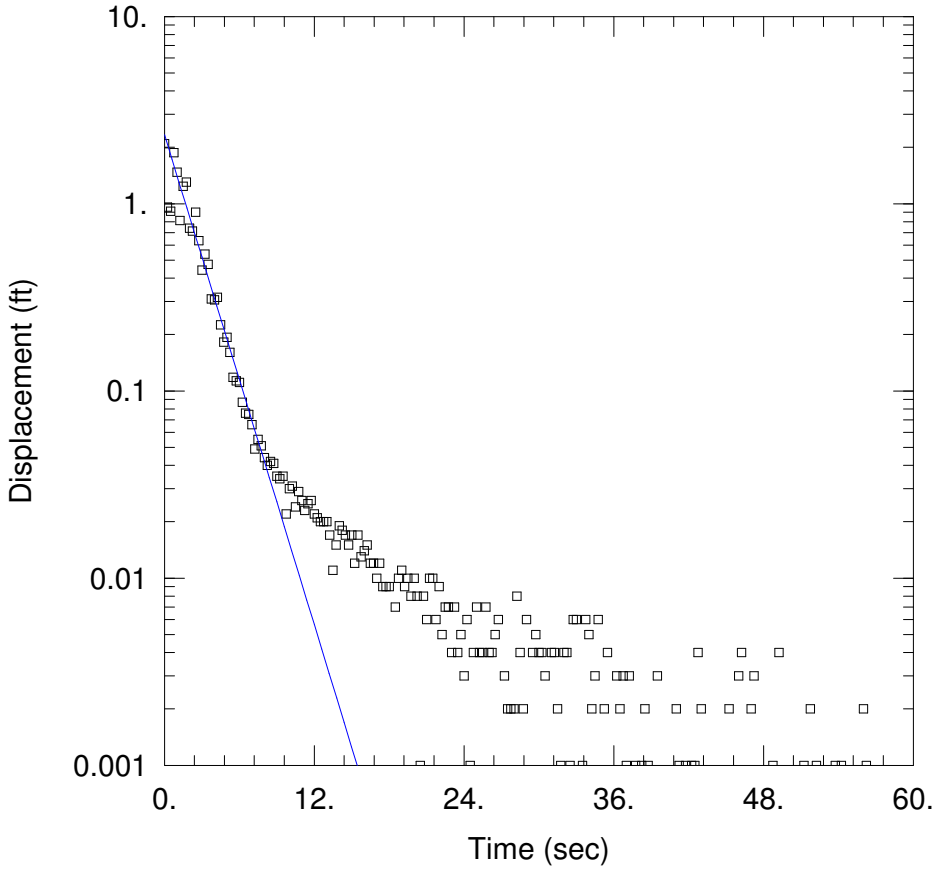
Saturated Thickness: 113.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C10-280)

Initial Displacement: 2.09 ft
Total Well Penetration Depth: 73.06 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 73.06 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 37.18 ft/day
Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C10-280-25psi_BR.aqt
Date: 03/11/13 Time: 10:41:59

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C10-280 □ □□□□r□□□□d □□ □□□ A □□□□
Test Date: 1/29/13

AQUIFER DATA

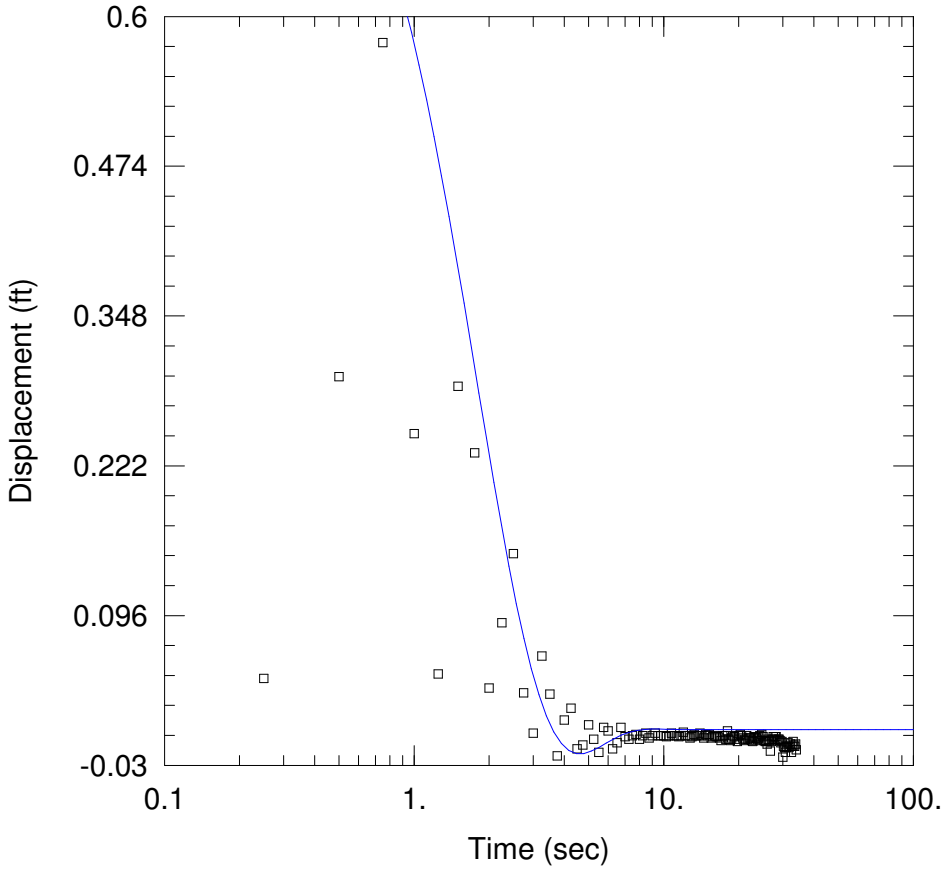
Saturated Thickness: 113.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C10-280)

Initial Displacement: 2.09 ft
Total Well Penetration Depth: 73.06 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 73.06 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 40.33 ft/day
y0 = 2.339 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C12-280-5psi.aqt
Date: 03/11/13 Time: 10:42:09

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C12-280 □ □□□□r□□□□d □□ □□□ A □□□□
Test Date: 1/30/13

AQUIFER DATA

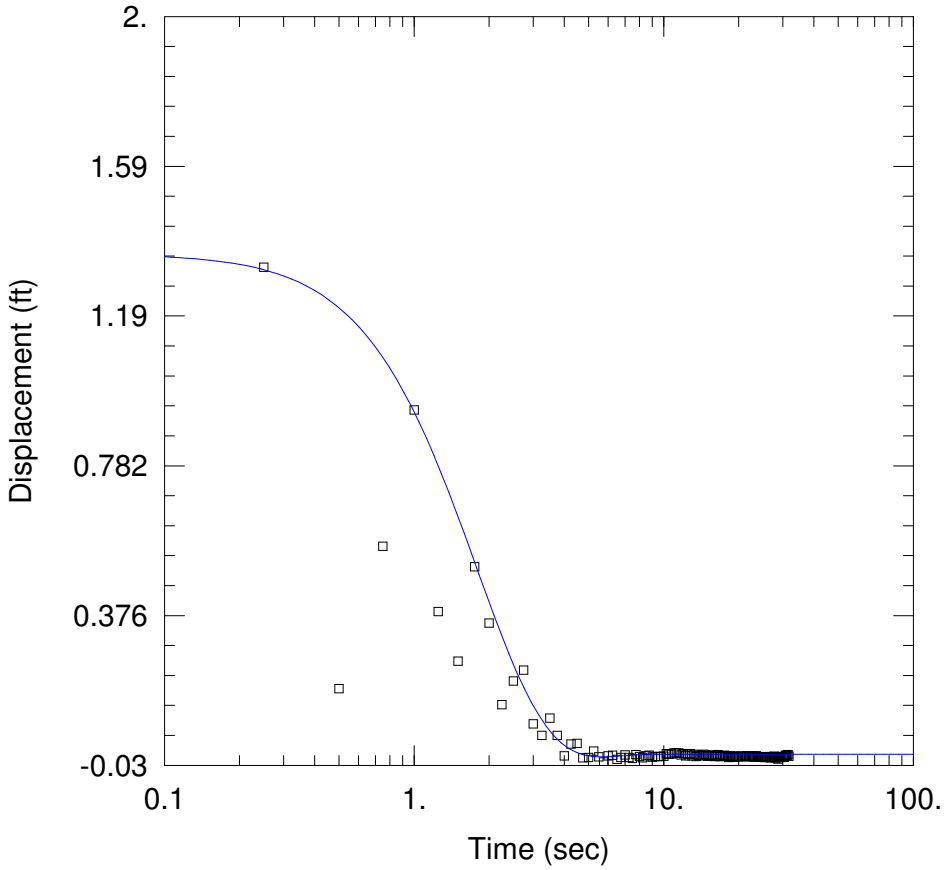
Saturated Thickness: 117.4 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C12-280)

Initial Displacement: 0.85 ft
Total Well Penetration Depth: 71.25 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.25 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 48.01 ft/day
Le = 28.84 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C12-280-10psi.aqt
Date: 03/11/13 Time: 10:42:18

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C12-280 □ □□□□r□□□□d □□ □□□ A □□□□
Test Date: 1/30/13

AQUIFER DATA

Saturated Thickness: 117.4 ft Anisotropy Ratio (Kz/Kr): 1.

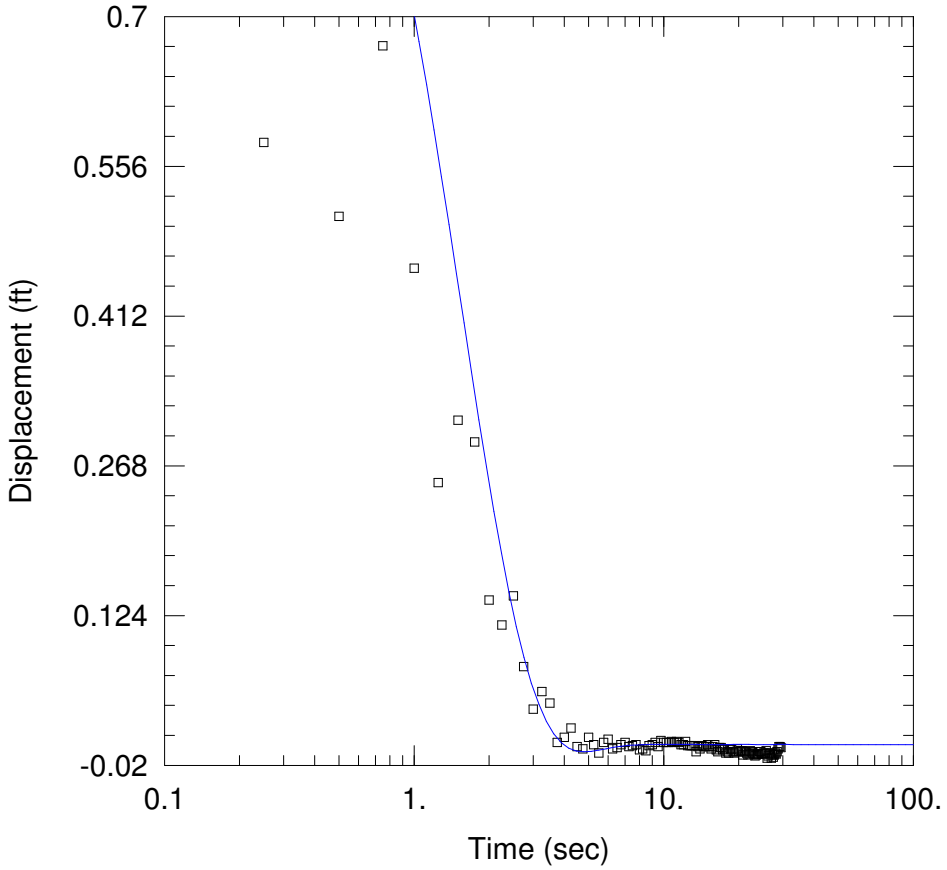
WELL DATA (NH-C12-280)

Initial Displacement: 1.356 ft
Total Well Penetration Depth: 71.25 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.25 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 43.81 ft/day Le = 27.54 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C12-280-20psi.aqt
Date: 03/11/13 Time: 10:42:26

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C12-280 □ □□□□r□□□□d □□ □□□ A □□□□
Test Date: 1/30/13

AQUIFER DATA

Saturated Thickness: 117.4 ft Anisotropy Ratio (Kz/Kr): 1.

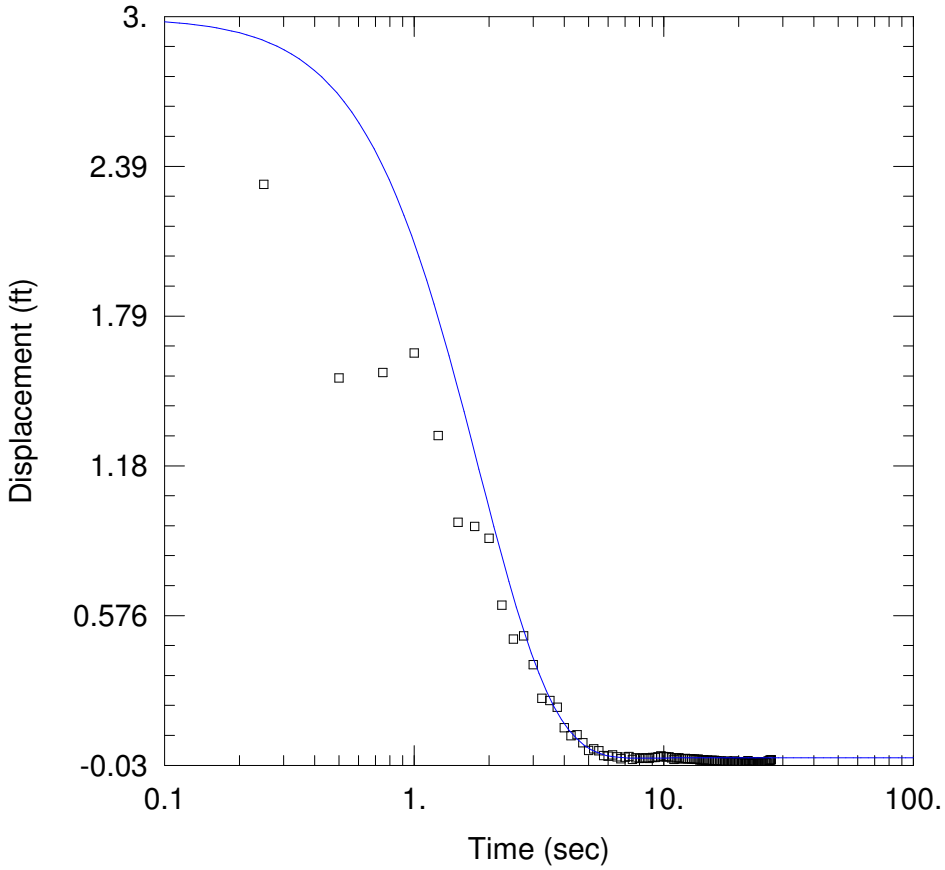
WELL DATA (NH-C12-280)

Initial Displacement: 1.136 ft
Total Well Penetration Depth: 71.25 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.25 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 50.74 ft/day Le = 20.89 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C12-280-30psi.aqt
Date: 03/11/13 Time: 10:42:36

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C12-280 □ □□□□r□□□□d □□ □□□ A □□□□
Test Date: 1/30/13

AQUIFER DATA

Saturated Thickness: 117.4 ft Anisotropy Ratio (Kz/Kr): 1.

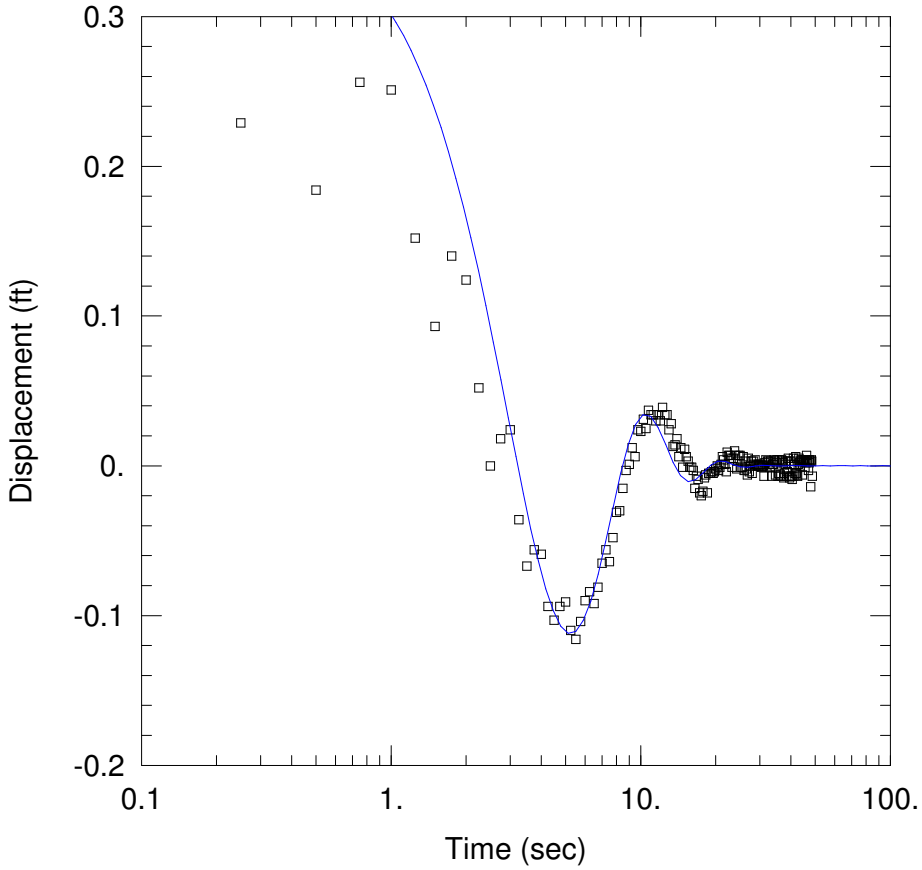
WELL DATA (NH-C12-280)

Initial Displacement: 2.995 ft
Total Well Penetration Depth: 71.25 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.25 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 40.3 ft/day Le = 27.54 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C13-385-5psi.aqt
Date: 03/11/13 Time: 10:42:47

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C13-385 □ □□□□r□□□□d □□ □□□ A and B Zones
Test Date: 1/29/13

AQUIFER DATA

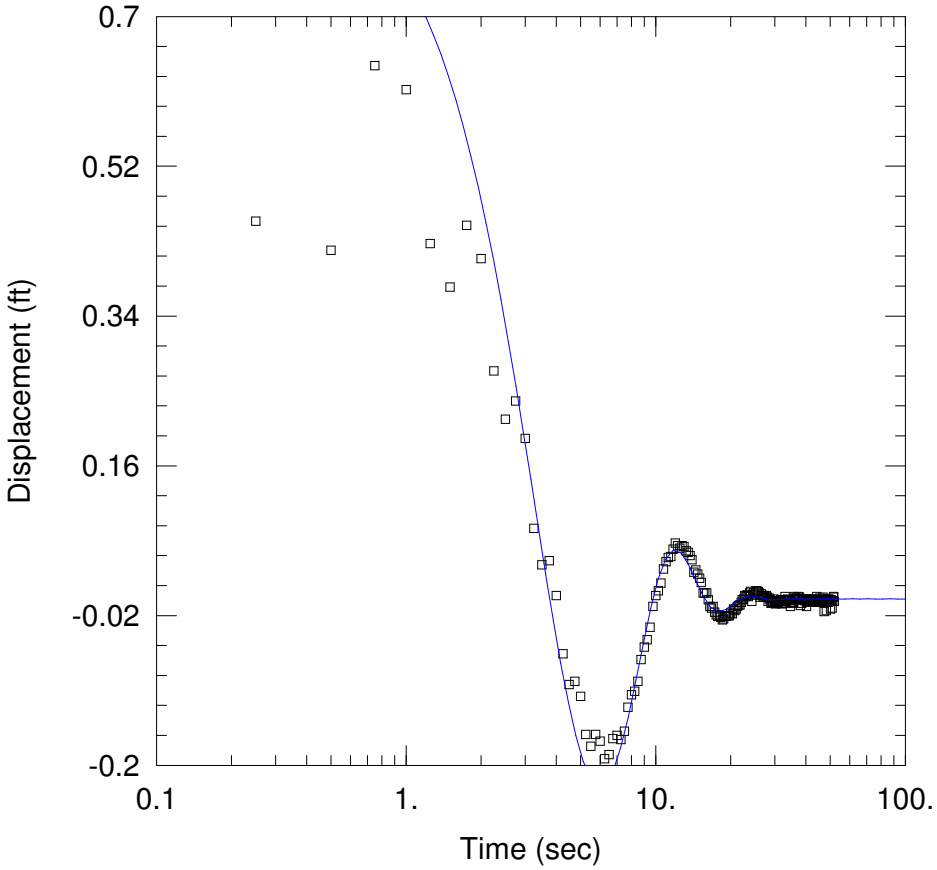
Saturated Thickness: 133.2 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C13-385)

Initial Displacement: 0.364 ft
Total Well Penetration Depth: 133.2 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 133.2 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 105.3 ft/day
Le = 78.46 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C13-385-10psi.aqt
Date: 03/11/13 Time: 10:42:55

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C13-385 □ e□s□reened □n □□e □ and B Zones
Test Date: 1/29/13

AQUIFER DATA

Saturated Thickness: 133.2 ft Anisotropy Ratio (Kz/Kr): 1.

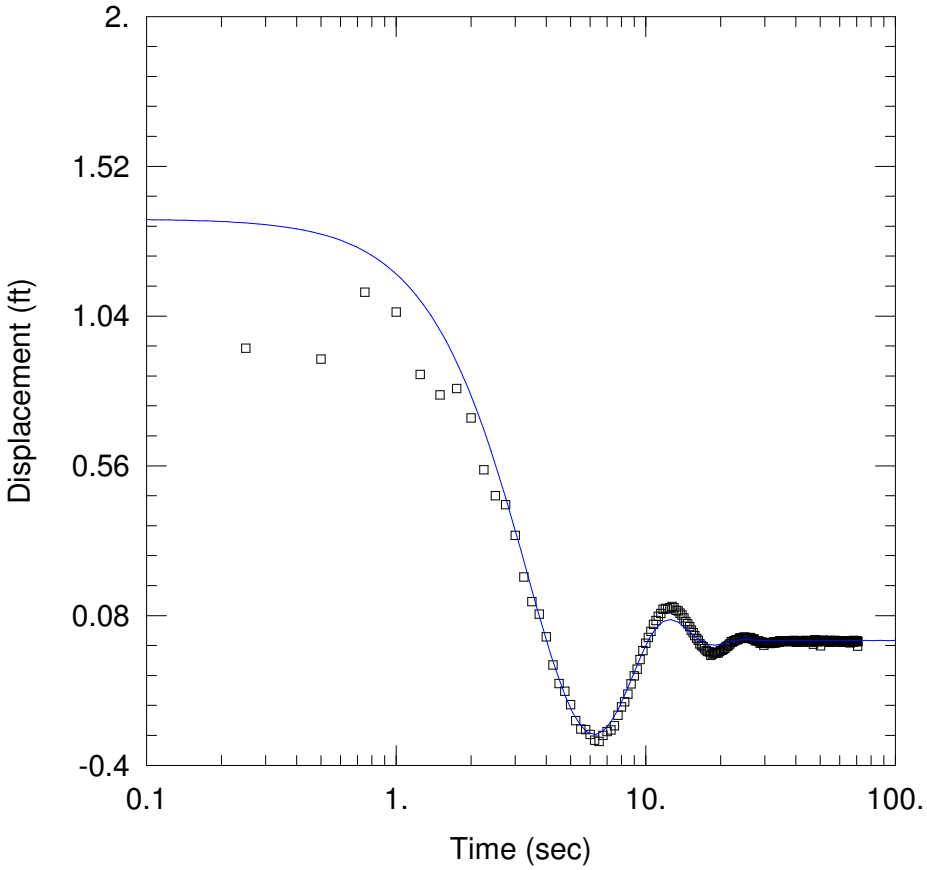
WELL DATA (NH-C13-385)

Initial Displacement: 0.864 ft
Total Well Penetration Depth: 133.2 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 133.2 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 83.68 ft/day Le = 98.78 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C13-385-20psi.aqt
Date: 03/11/13 Time: 10:43:03

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C13-385 □ e□□s□reened □n □□e □ and B Zones
Test Date: 1/29/13

AQUIFER DATA

Saturated Thickness: 133.2 ft Anisotropy Ratio (Kz/Kr): 1.

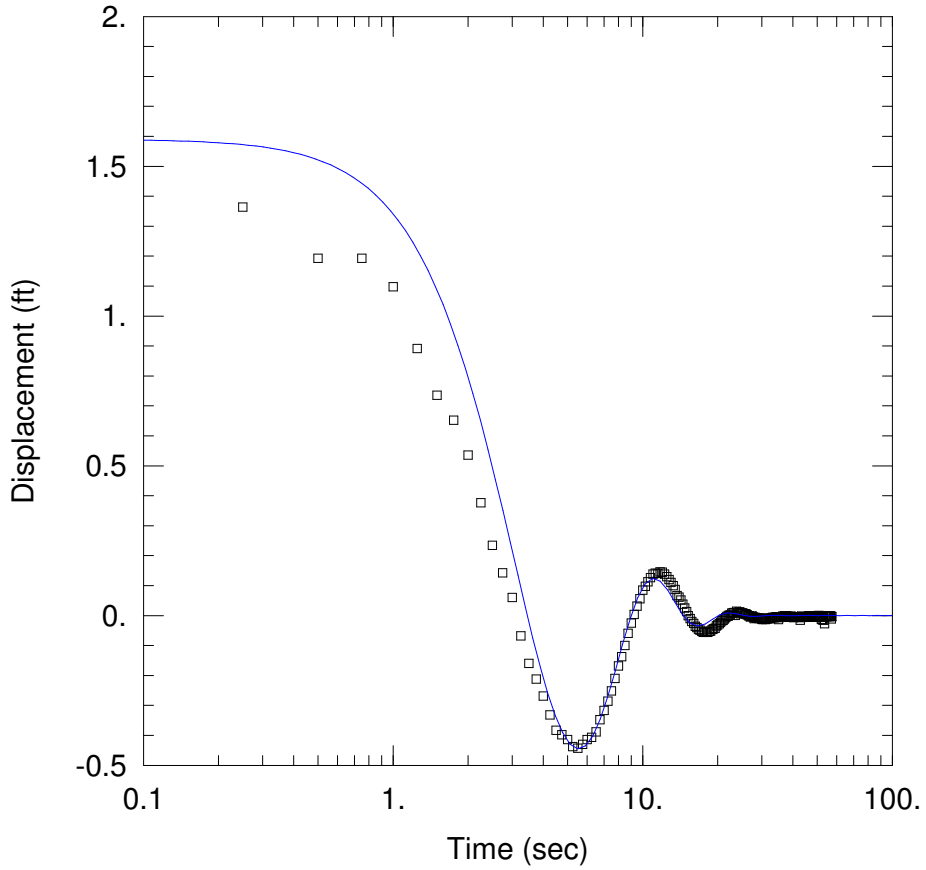
WELL DATA (NH-C13-385)

Initial Displacement: 1.351 ft
Total Well Penetration Depth: 133.2 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 133.2 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 74.58 ft/day Le = 103.4 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C13-385-30psi.aqt
Date: 03/11/13 Time: 10:43:12

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C13-385 □ e□s□reened □n □□e □ and B Zones
Test Date: 1/29/13

AQUIFER DATA

Saturated Thickness: 133.2 ft Anisotropy Ratio (Kz/Kr): 1.

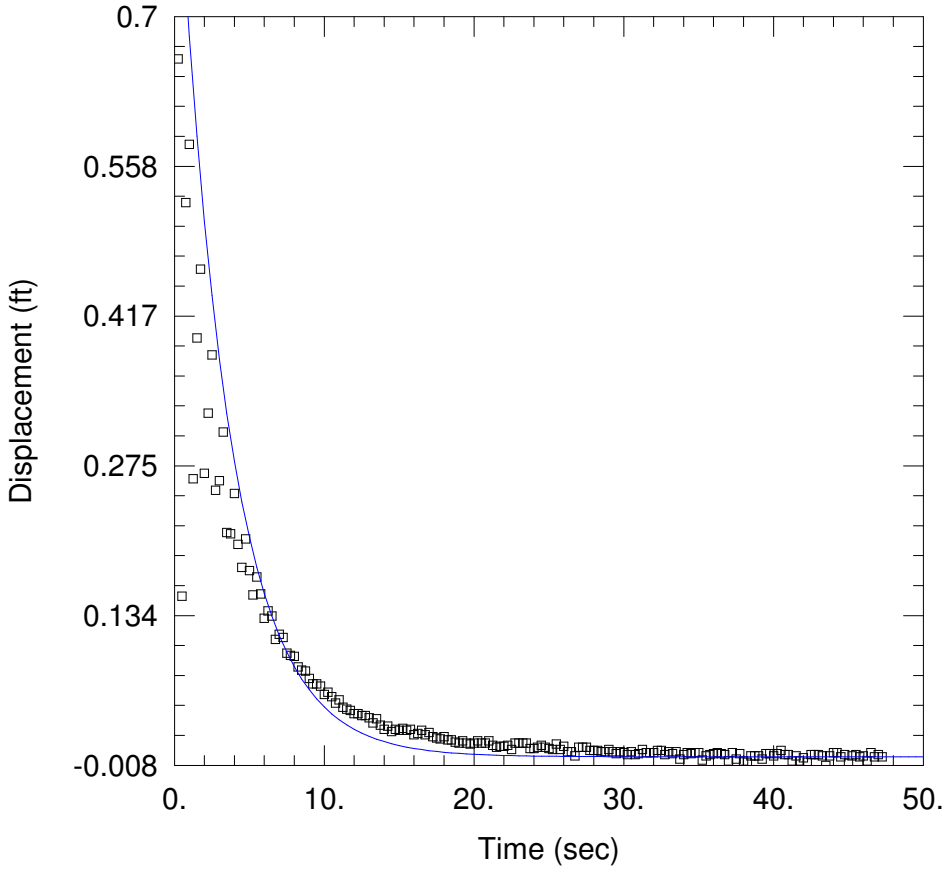
WELL DATA (NH-C13-385)

Initial Displacement: 1.59 ft
Total Well Penetration Depth: 133.2 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 133.2 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 93.89 ft/day Le = 86.03 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C14-250-6psi.aqt
Date: 03/11/13 Time: 10:43:23

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C14-250 □ e□s□reened □n □□e □ Zone
Test Date: 1/30/13

AQUIFER DATA

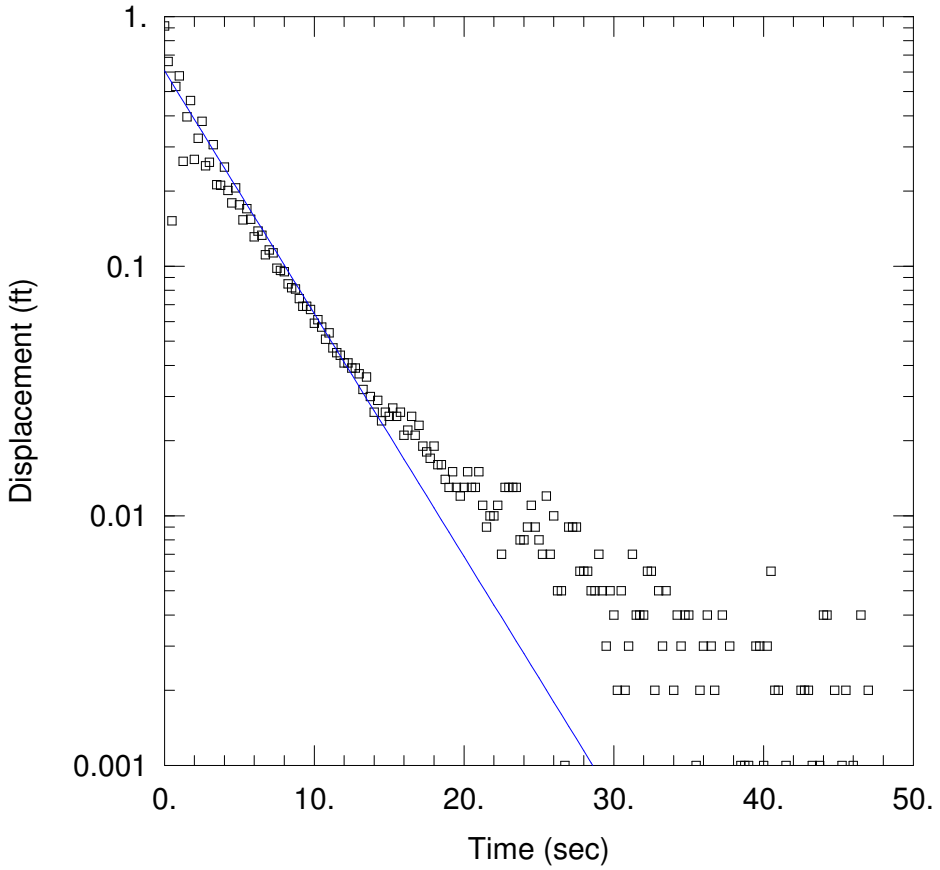
Saturated Thickness: 111. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C14-250)

Initial Displacement: 0.916 ft
Total Well Penetration Depth: 54.81 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 54.81 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 26.78 ft/day
Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C14-250-6psi_BR.aqt
Date: 03/11/13 Time: 10:43:31

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C14-250 □ e□s□reened □n □e □ Zone
Test Date: 1/30/13

AQUIFER DATA

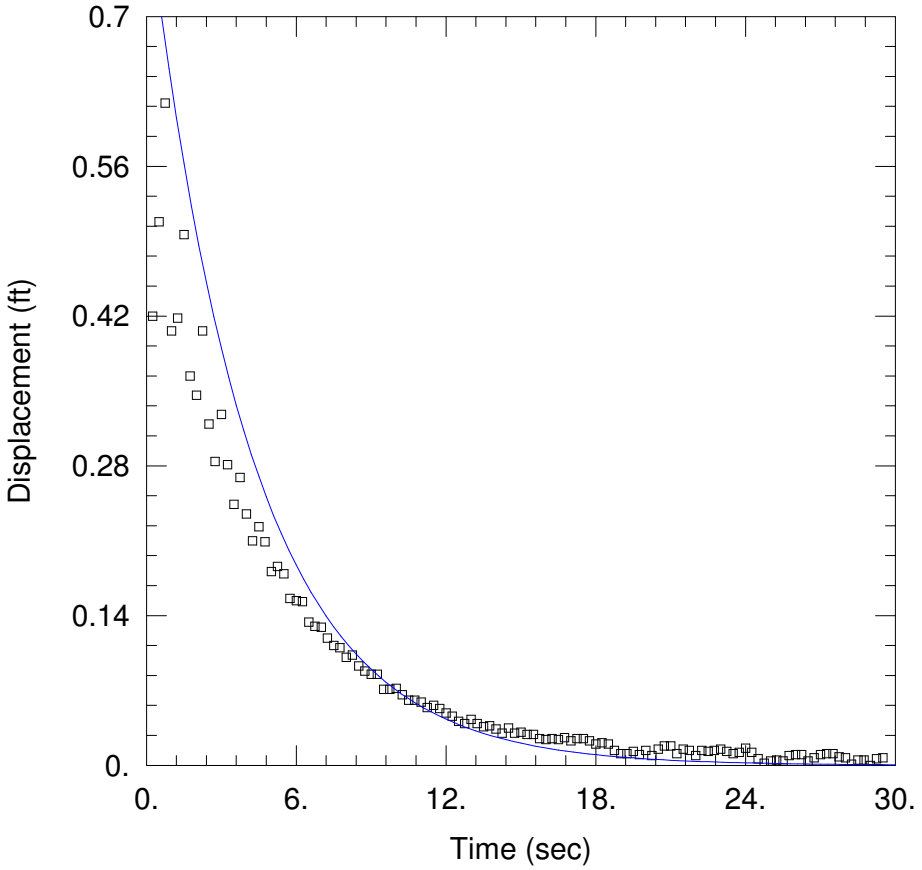
Saturated Thickness: 111. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C14-250)

Initial Displacement: 0.916 ft
Total Well Penetration Depth: 54.81 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 54.81 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 20.22 ft/day
y0 = 0.6058 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C14-250-10psi.aqt
Date: 03/11/13 Time: 10:43:39

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C14-250 □ e□s□reened □n □e □ Zone
Test Date: 1/30/13

AQUIFER DATA

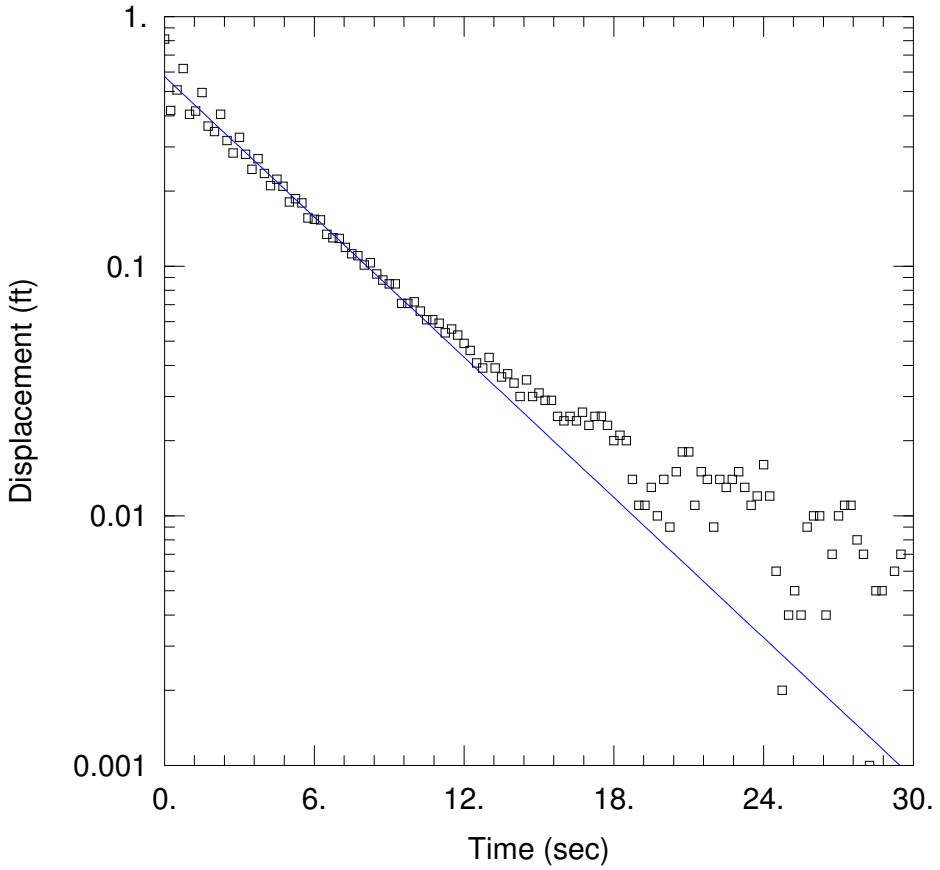
Saturated Thickness: 111. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C14-250)

Initial Displacement: 0.812 ft
Total Well Penetration Depth: 54.81 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 54.81 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 22.08 ft/day
Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C14-250-10psi_BR.aqt
Date: 03/11/13 Time: 10:43:49

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C14-250 □ e□s□reened □n □□e □ Zone
Test Date: 1/30/13

AQUIFER DATA

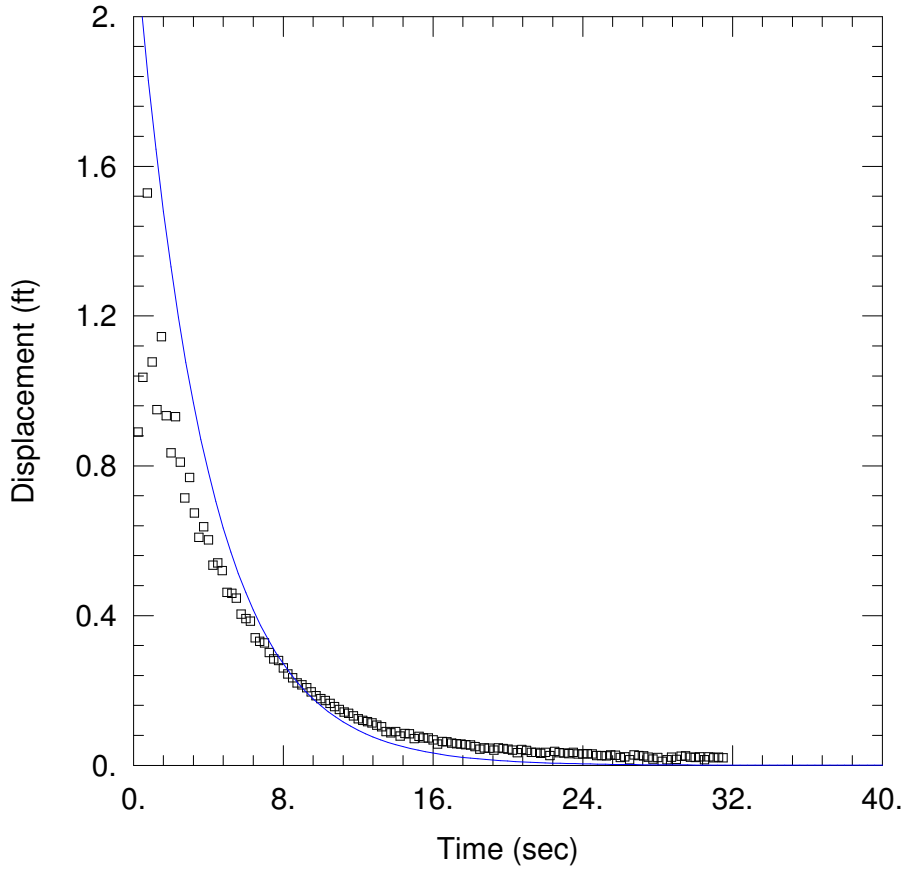
Saturated Thickness: 111. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C14-250)

Initial Displacement: 0.812 ft
Total Well Penetration Depth: 54.81 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 54.81 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 19.46 ft/day
y0 = 0.5745 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C14-250-20psi.aqt
Date: 03/11/13 Time: 10:43:58

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C14-250 □ e□s□reened □n □□e □ Zone
Test Date: 1/30/13

AQUIFER DATA

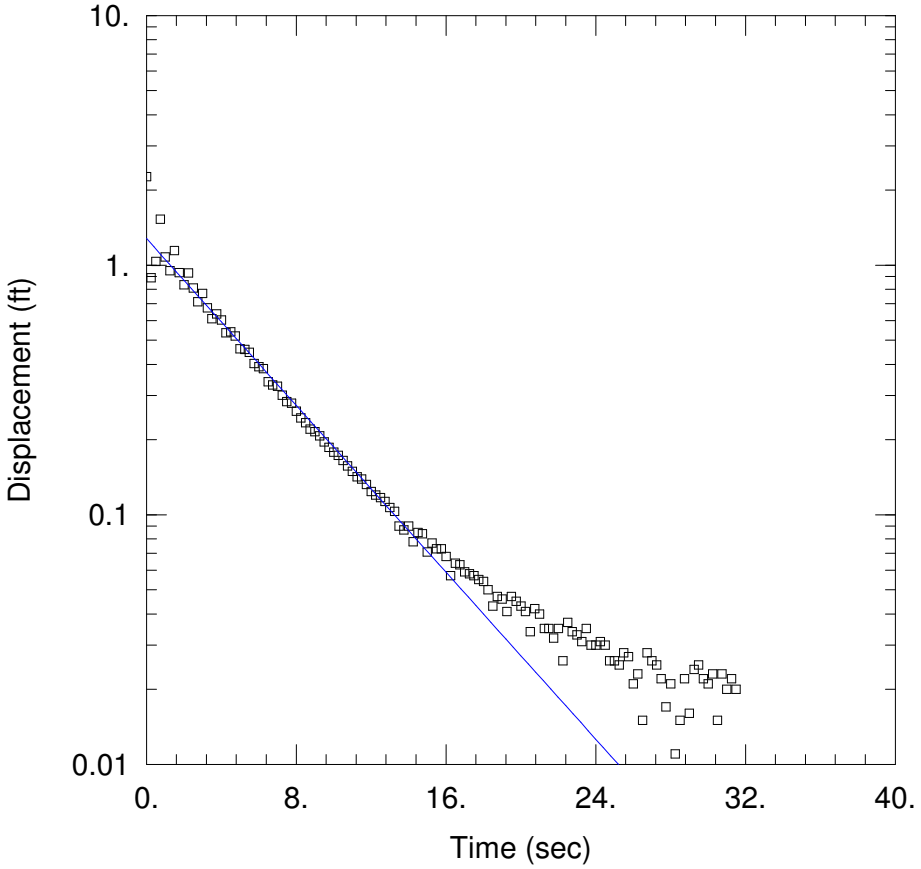
Saturated Thickness: 111. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C14-250)

Initial Displacement: 2.261 ft
Total Well Penetration Depth: 54.81 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 54.81 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 23.93 ft/day
Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C14-250-20psi_BR.aqt
Date: 03/11/13 Time: 10:44:06

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C14-250 □ e□s□reened □n □□e □ Zone
Test Date: 1/30/13

AQUIFER DATA

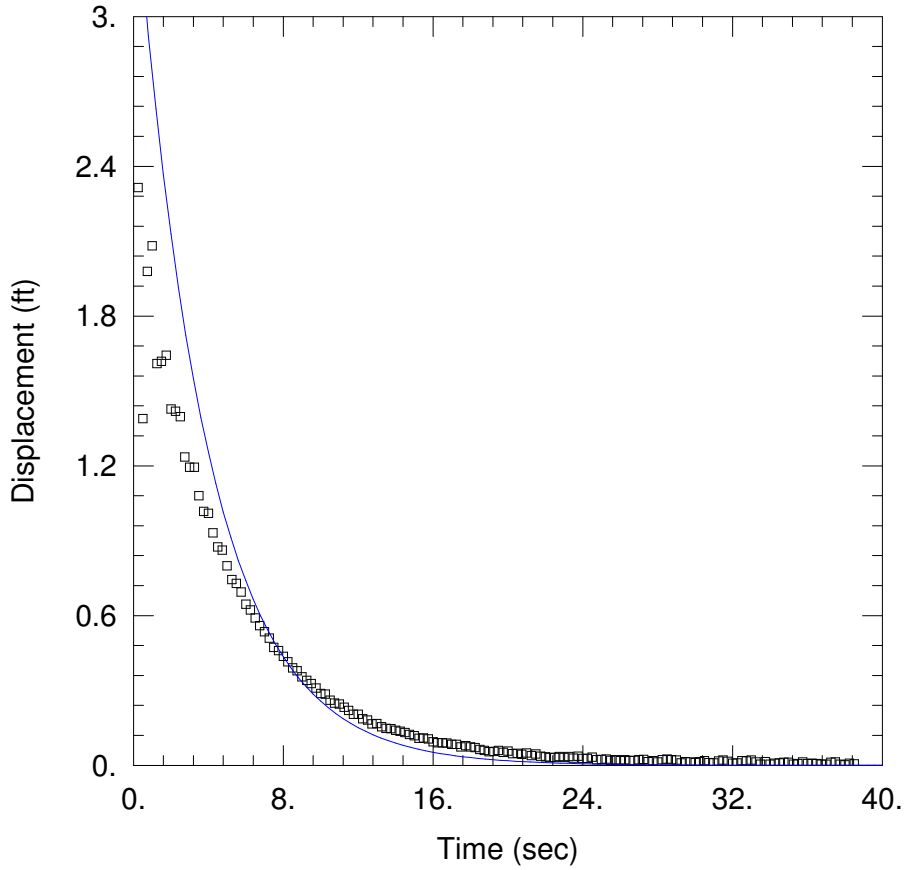
Saturated Thickness: 111. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C14-250)

Initial Displacement: 2.261 ft
Total Well Penetration Depth: 54.81 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 54.81 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 17.37 ft/day
y0 = 1.278 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C14-250-30psi.aqt
Date: 03/11/13 Time: 10:44:14

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C14-250 □ e□s□reened □n □e □ Zone
Test Date: 1/30/13

AQUIFER DATA

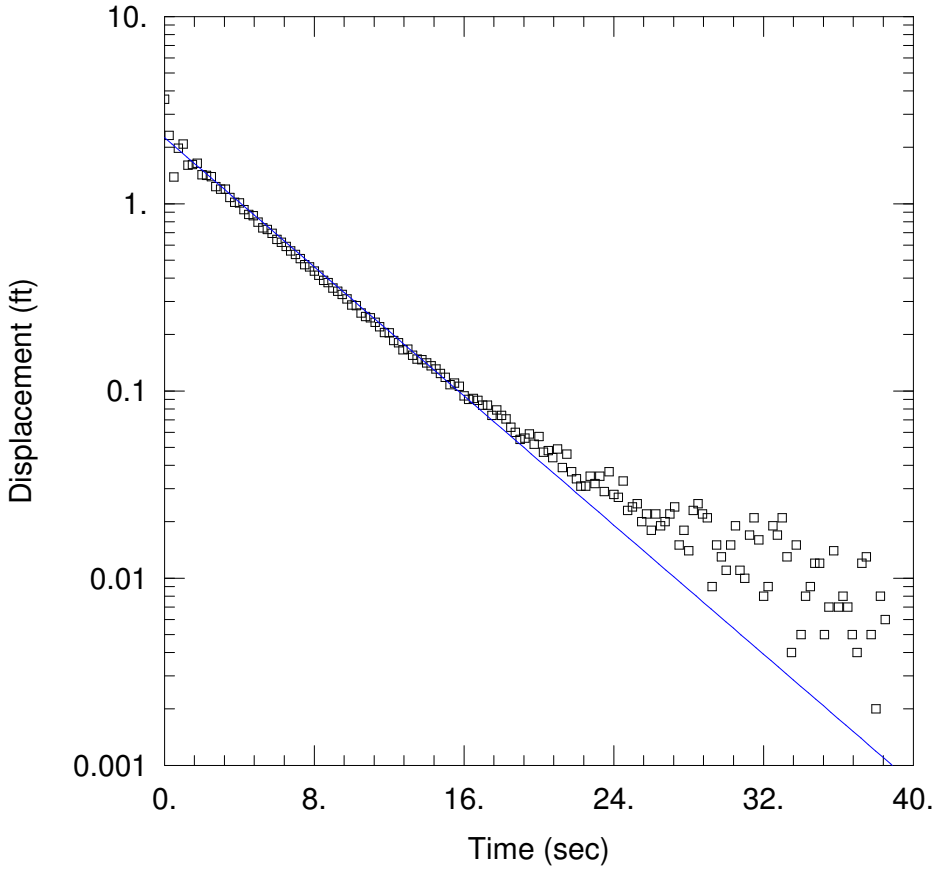
Saturated Thickness: 111. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C14-250)

Initial Displacement: 3.611 ft
Total Well Penetration Depth: 54.81 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 54.81 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 23.87 ft/day
Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C14-250-30psi_BR.aqt
Date: 03/11/13 Time: 10:44:23

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C14-250 □ e□s□reened □n □□e □ Zone
Test Date: 1/30/13

AQUIFER DATA

Saturated Thickness: 111. ft Anisotropy Ratio (Kz/Kr): 1.

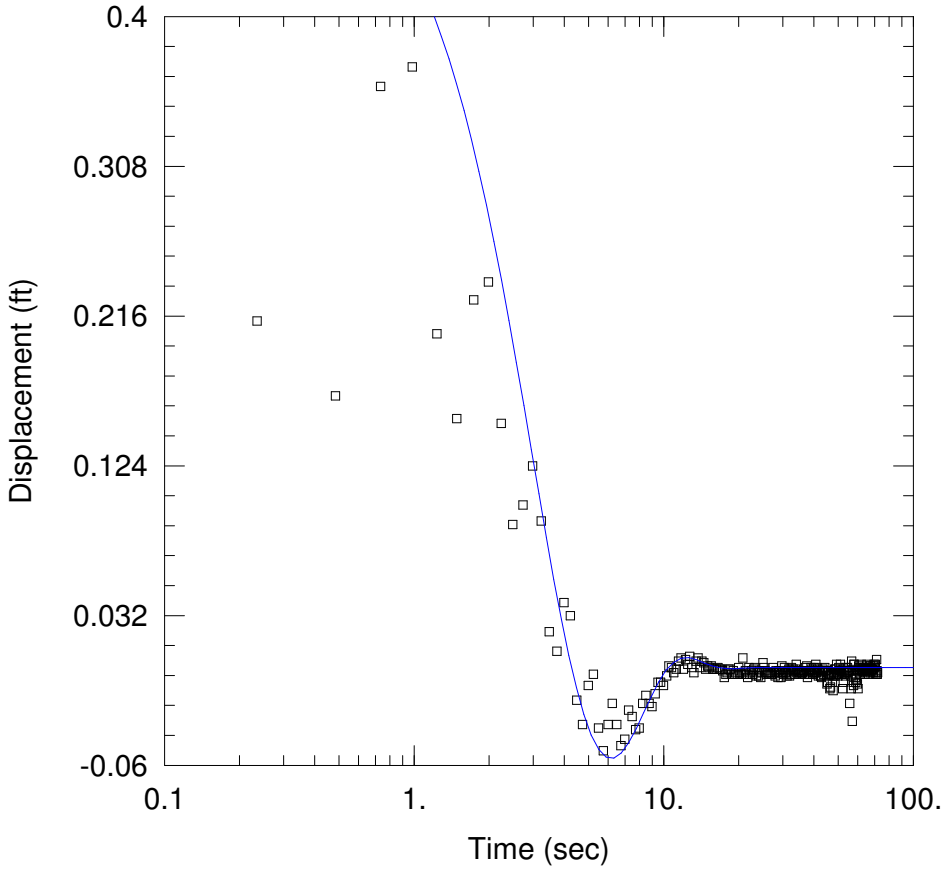
WELL DATA (NH-C14-250)

Initial Displacement: 3.611 ft
Total Well Penetration Depth: 54.81 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 54.81 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 17.92 ft/day y0 = 2.254 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C16-390-5psi.aqt
Date: 03/11/13 Time: 10:44:32

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C16-390 □ e□s□reened □n □□e □ and B Zones
Test Date: 1/30/13

AQUIFER DATA

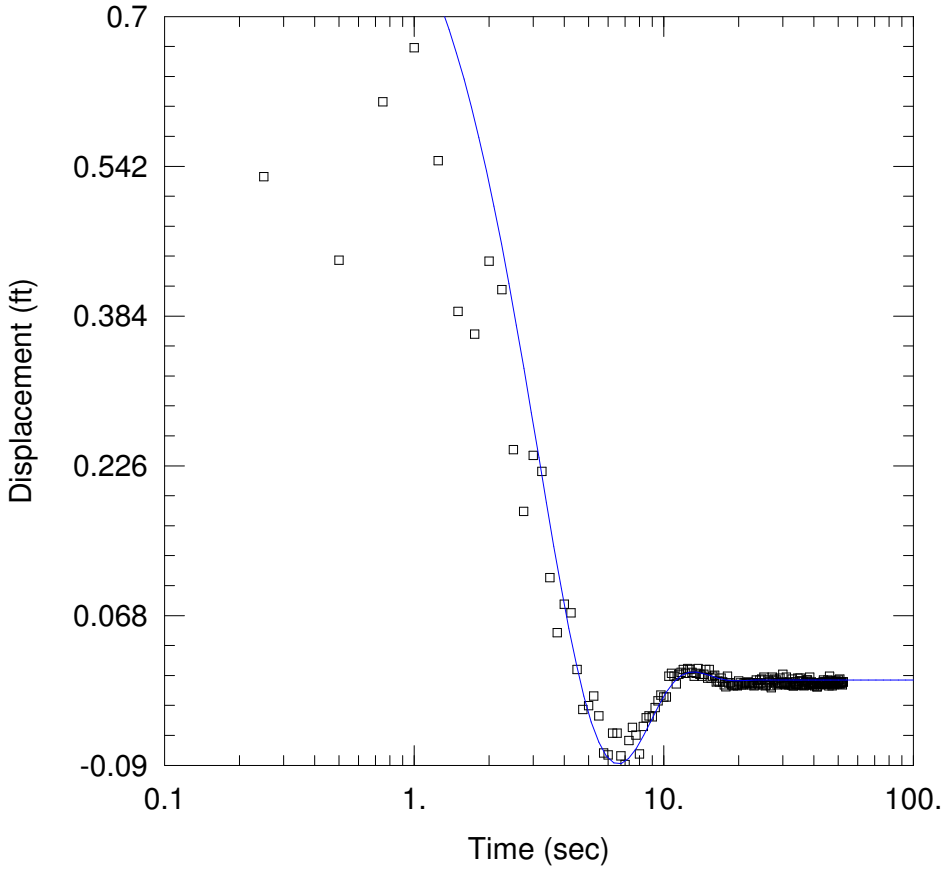
Saturated Thickness: 121.7 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C16-390)

Initial Displacement: 0.504 ft
Total Well Penetration Depth: 121.7 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 121.7 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 61.7 ft/day
Le = 82.83 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C16-390-10psi.aqt
Date: 03/11/13 Time: 10:44:42

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C16-390 □ e□s□reened □n □□e □ and B Zones
Test Date: 1/30/13

AQUIFER DATA

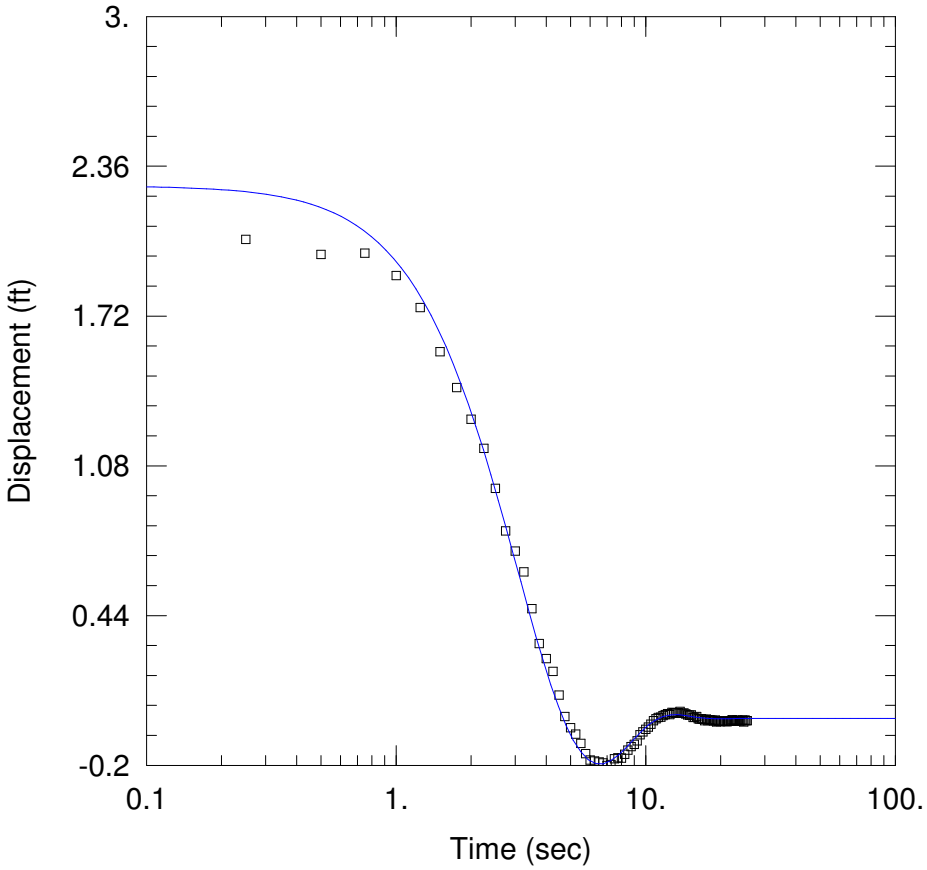
Saturated Thickness: 121.7 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C16-390)

Initial Displacement: 0.899 ft
Total Well Penetration Depth: 121.7 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 121.7 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 56.8 ft/day
Le = 91.2 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C16-390-30psi.aqt
Date: 03/11/13 Time: 10:44:50

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C16-390 □ e□s□reened □n □□e □ and B Zones
Test Date: 1/30/13

AQUIFER DATA

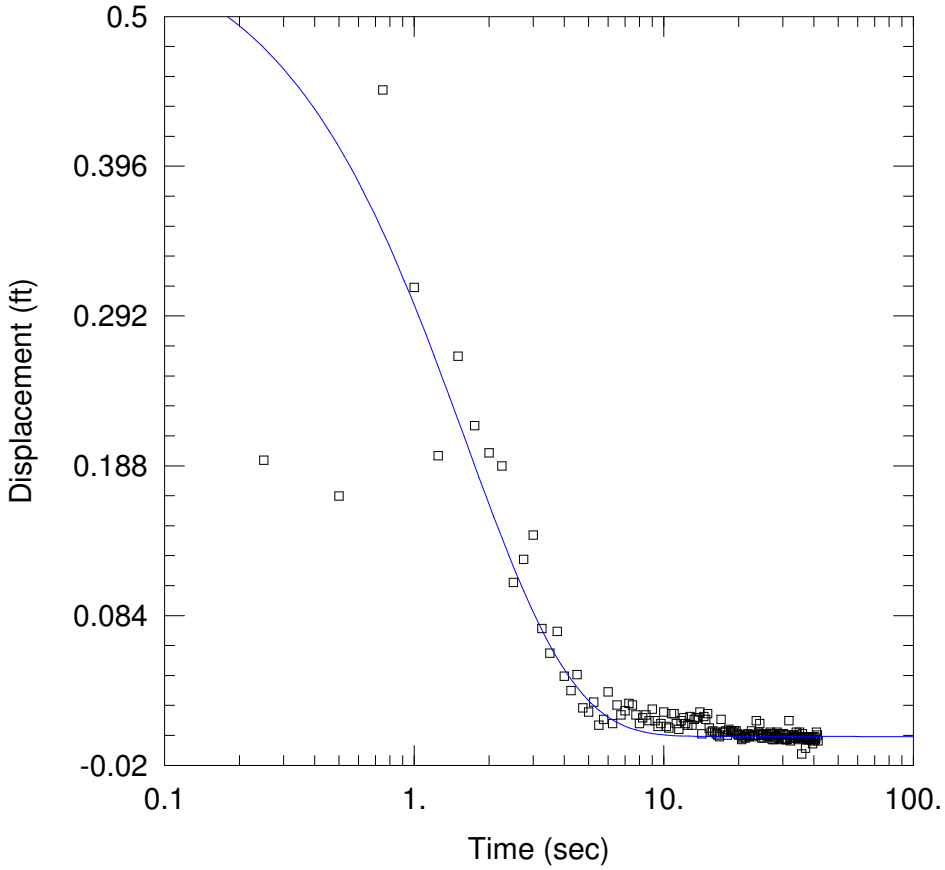
Saturated Thickness: 121.7 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C16-390)

Initial Displacement: 2.276 ft
Total Well Penetration Depth: 121.7 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 121.7 ft
Screen Length: 50. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 56. ft/day
Le = 87.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C17-255-5psi.aqt
Date: 03/11/13 Time: 10:44:57

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C17-255 □ e□s□reened □n □□e □ Zone
Test Date: 1/30/13

AQUIFER DATA

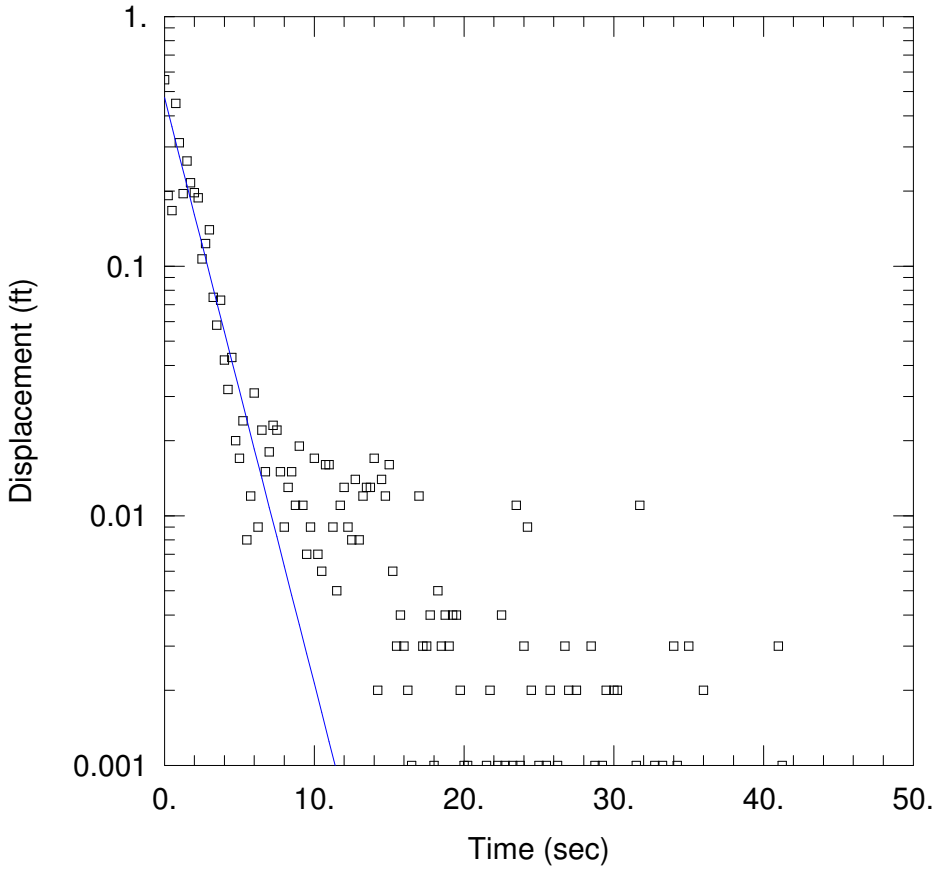
Saturated Thickness: 102.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C17-255)

Initial Displacement: 0.558 ft
Total Well Penetration Depth: 71.82 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.83 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 43.62 ft/day
Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C17-255-5psi_BR.aqt
Date: 03/11/13 Time: 10:45:06

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C17-255 □ e□s□reened □n □□e □ Zone
Test Date: 1/30/13

AQUIFER DATA

Saturated Thickness: 102.8 ft Anisotropy Ratio (Kz/Kr): 1.

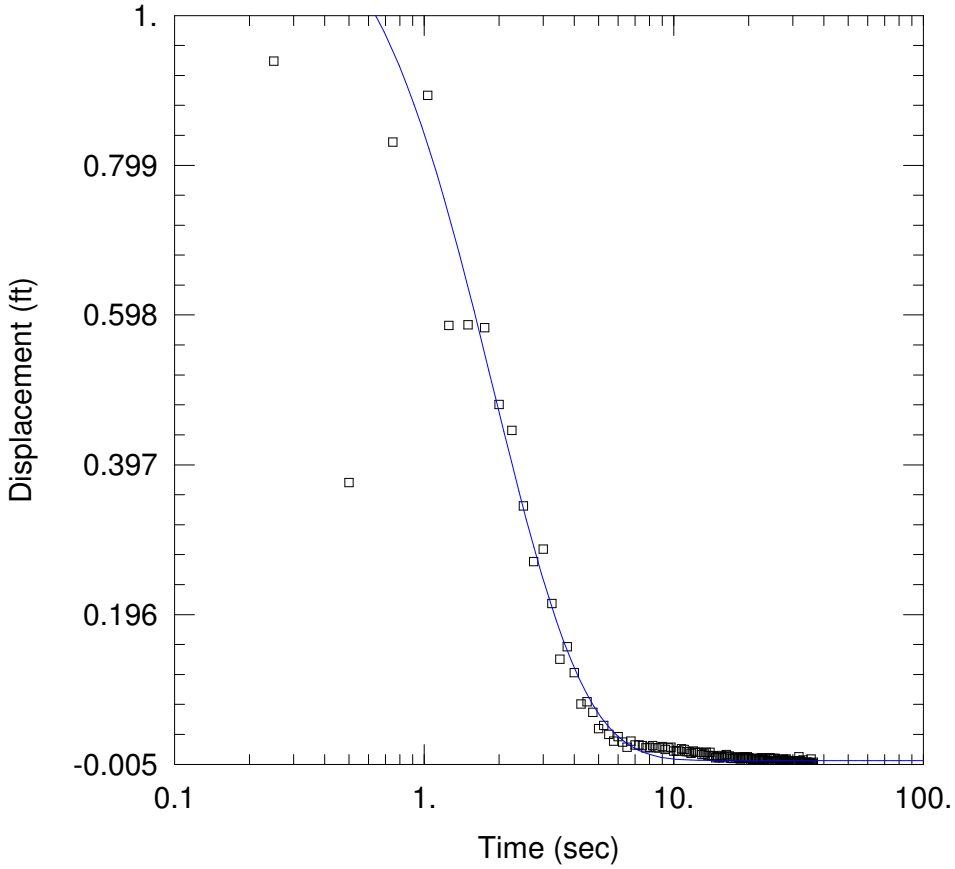
WELL DATA (NH-C17-255)

Initial Displacement: 0.558 ft
Total Well Penetration Depth: 71.82 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.83 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 37.91 ft/day y0 = 0.4735 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C17-255-15psi.aqt
Date: 03/11/13 Time: 10:45:21

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C17-255 □ e□s□reened □n □□e □ Zone
Test Date: 1/30/13

AQUIFER DATA

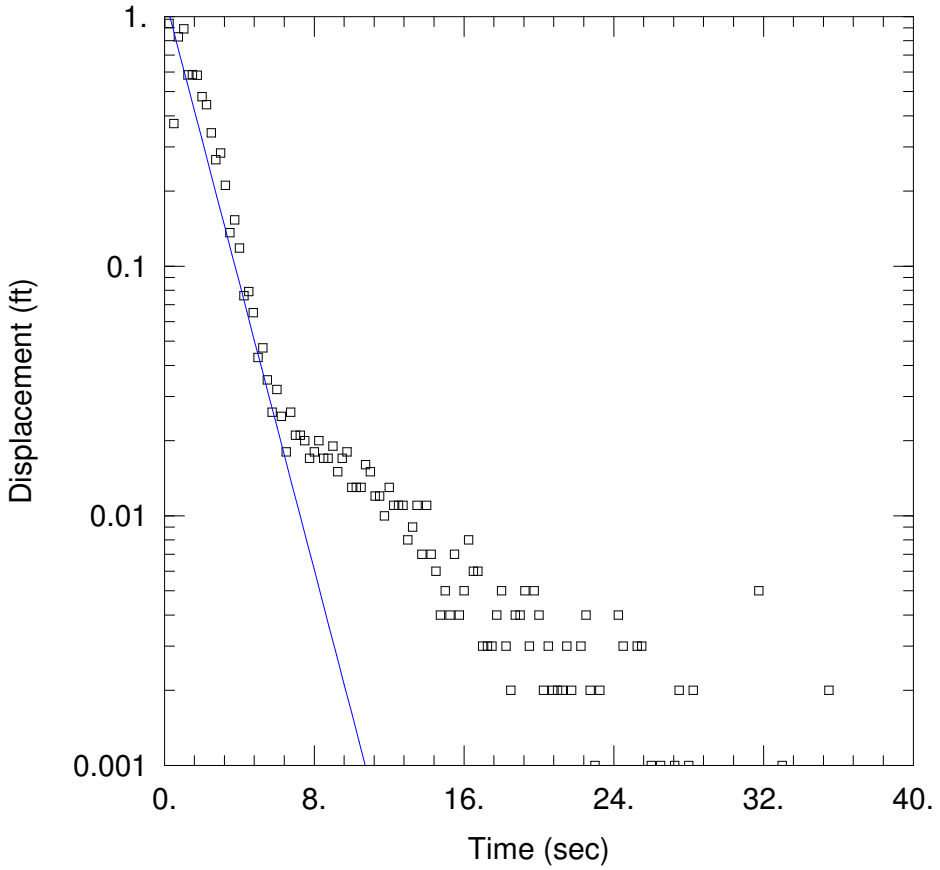
Saturated Thickness: 102.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C17-255)

Initial Displacement: 1.179 ft
Total Well Penetration Depth: 71.82 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.83 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 34.65 ft/day
Le = 26.3 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C17-255-15psi_BR.aqt
Date: 03/11/13 Time: 10:45:30

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C17-255 □ e□s□reened □n □e □ Zone
Test Date: 1/30/13

AQUIFER DATA

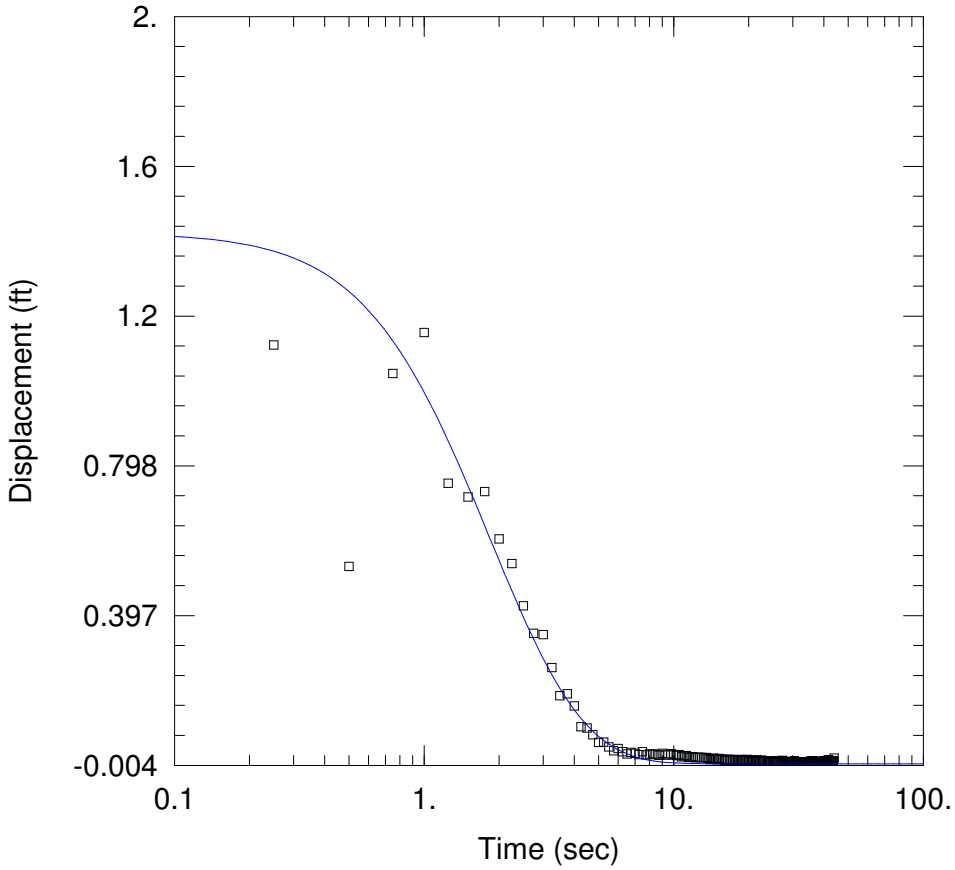
Saturated Thickness: 102.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C17-255)

Initial Displacement: 1.179 ft
Total Well Penetration Depth: 71.82 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.83 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 46.45 ft/day
y0 = 1.21 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C17-255-20psi.aqt
Date: 03/11/13 Time: 10:45:37

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C17-255 □ e□s□reened □n □□e □ Zone
Test Date: 1/30/13

AQUIFER DATA

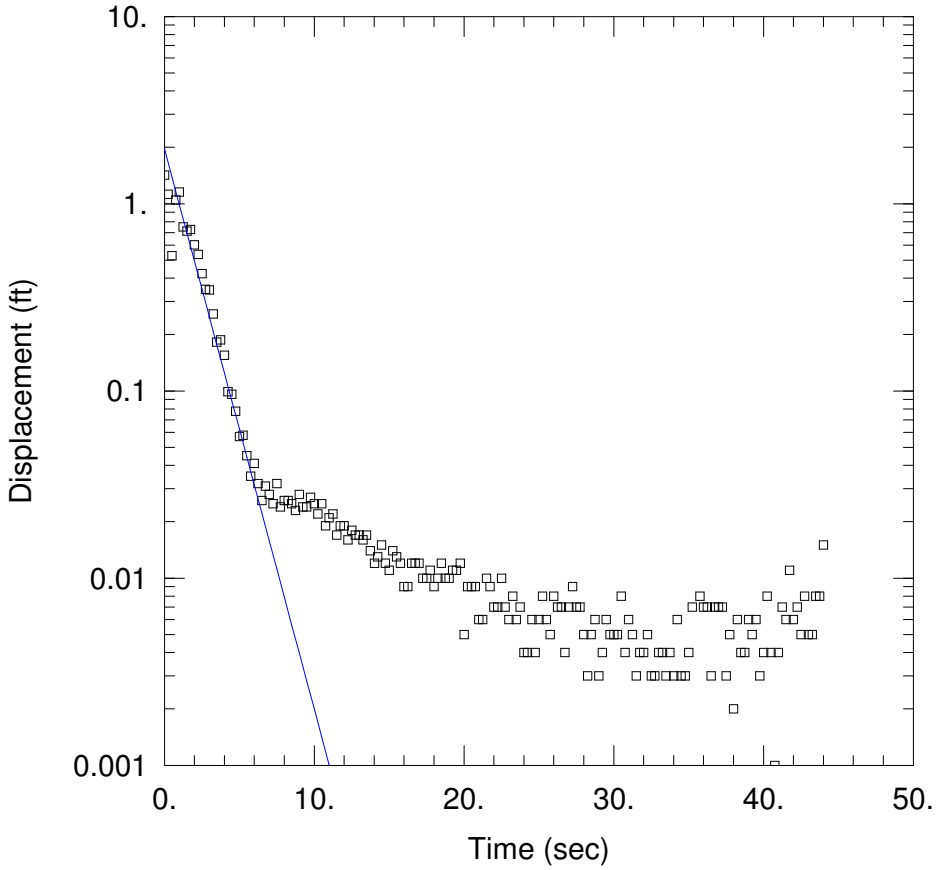
Saturated Thickness: 102.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C17-255)

Initial Displacement: 1.42 ft
Total Well Penetration Depth: 71.82 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.83 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 35.39 ft/day
Le = 23.99 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C17-255-20psi_BR.aqt
Date: 03/11/13 Time: 10:45:46

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C17-255 □ e□s□reened □n □e □ Zone
Test Date: 1/30/13

AQUIFER DATA

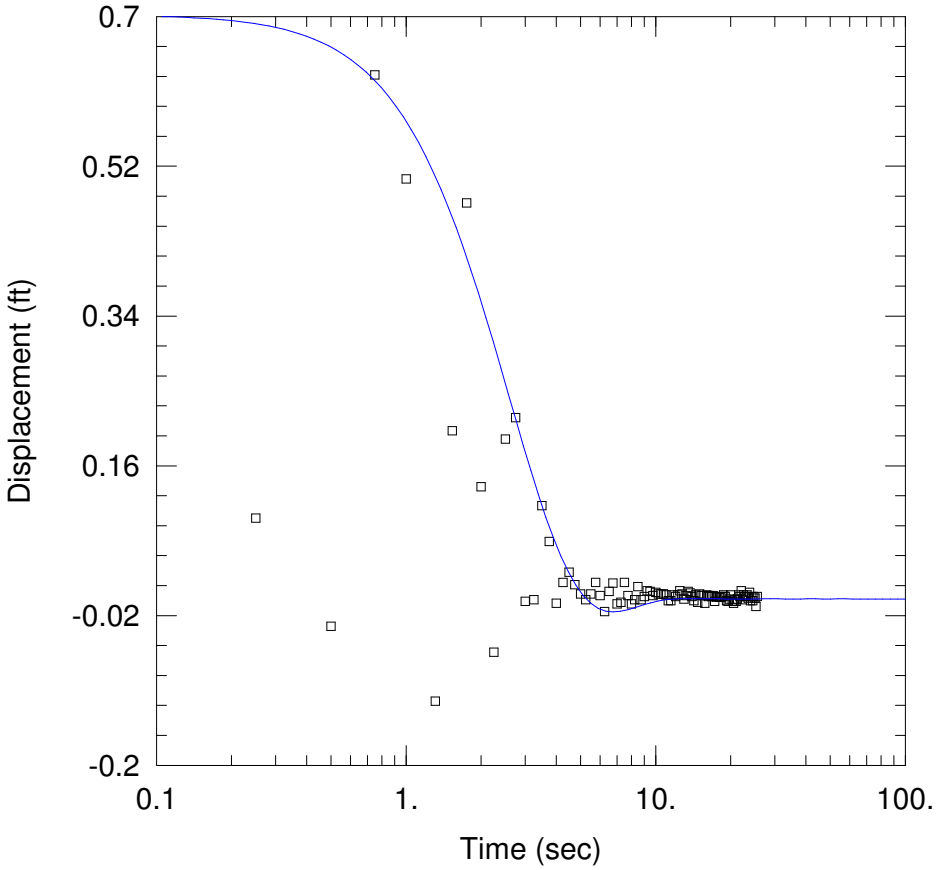
Saturated Thickness: 102.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C17-255)

Initial Displacement: 1.42 ft
Total Well Penetration Depth: 71.82 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.83 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 48.34 ft/day
y0 = 1.961 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C19-290-5psi-1.aqt
Date: 03/11/13 Time: 10:53:25

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C19-290 □ e□s□reened □n □e □ Zone
Test Date: 2/6/13

AQUIFER DATA

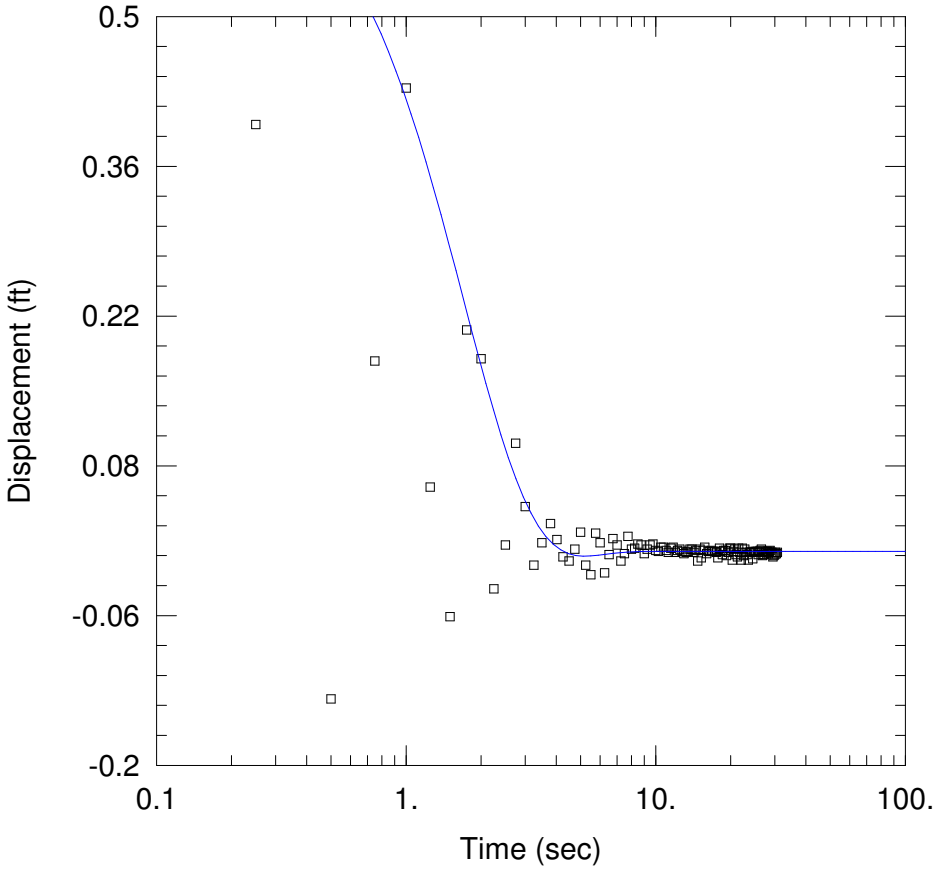
Saturated Thickness: 111.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C19-290)

Initial Displacement: 0.702 ft
Total Well Penetration Depth: 63.97 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 63.97 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 37.26 ft/day
Le = 60.26 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C19-290-5psi-2.aqt
Date: 03/11/13 Time: 10:53:17

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C19-290 □ e□s□reened □n □□e □ Zone
Test Date: 2/6/13

AQUIFER DATA

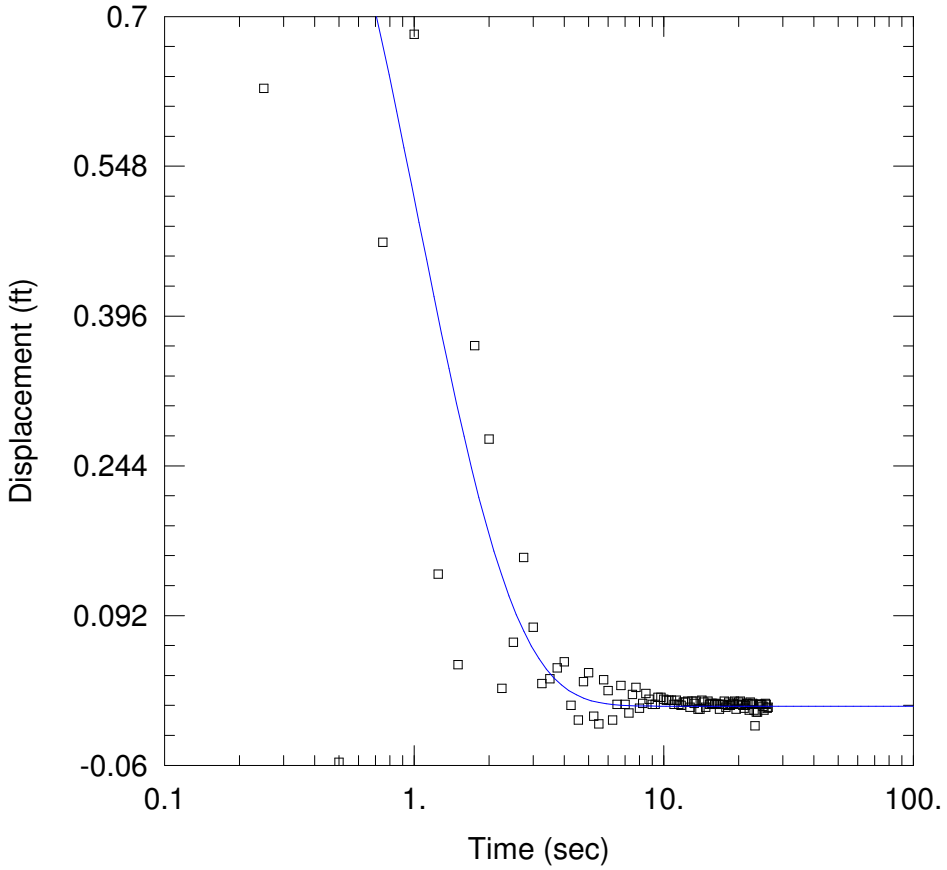
Saturated Thickness: 111.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C19-290)

Initial Displacement: 0.639 ft
Total Well Penetration Depth: 63.97 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 63.97 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 52.64 ft/day
Le = 25.12 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C19-290-10psi.aqt
Date: 03/11/13 Time: 10:53:07

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C19-290 □ e□s□reened □n □□e □ Zone
Test Date: 2/6/13

AQUIFER DATA

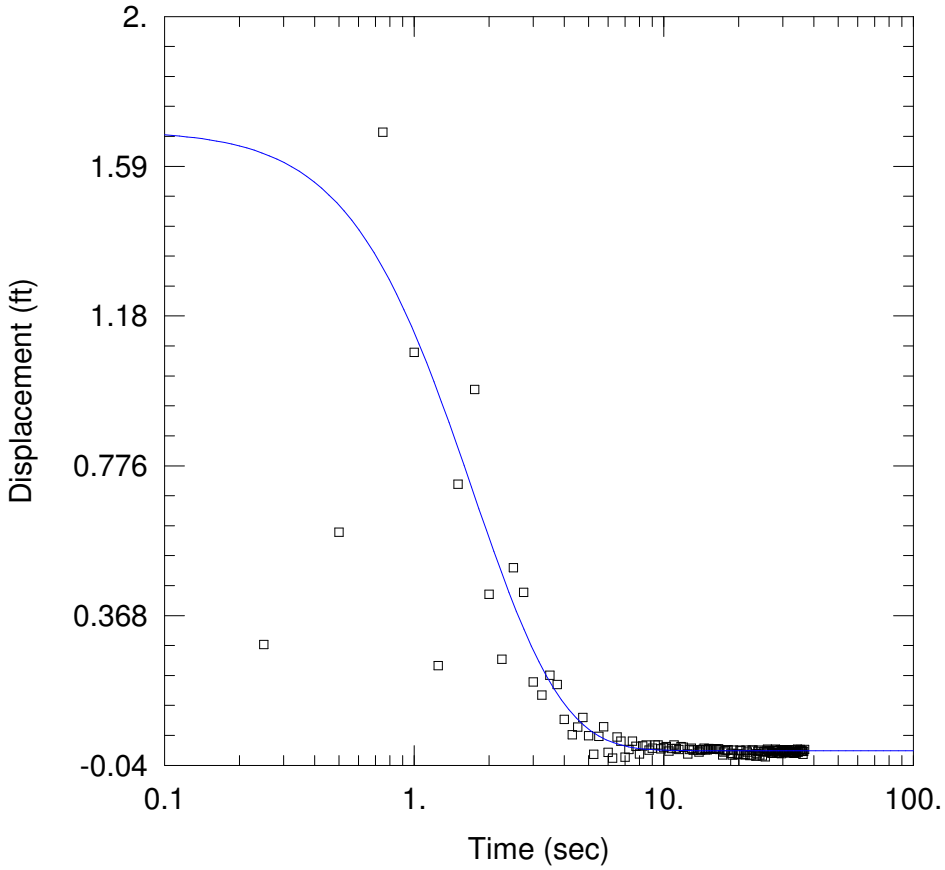
Saturated Thickness: 111.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C19-290)

Initial Displacement: 1.161 ft
Total Well Penetration Depth: 63.97 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 63.97 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 68.68 ft/day
Le = 6.918 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C19-290-20psi.aqt
Date: 03/11/13 Time: 10:52:58

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C19-290 □ e□s□reened □n □□e □ Zone
Test Date: 2/6/13

AQUIFER DATA

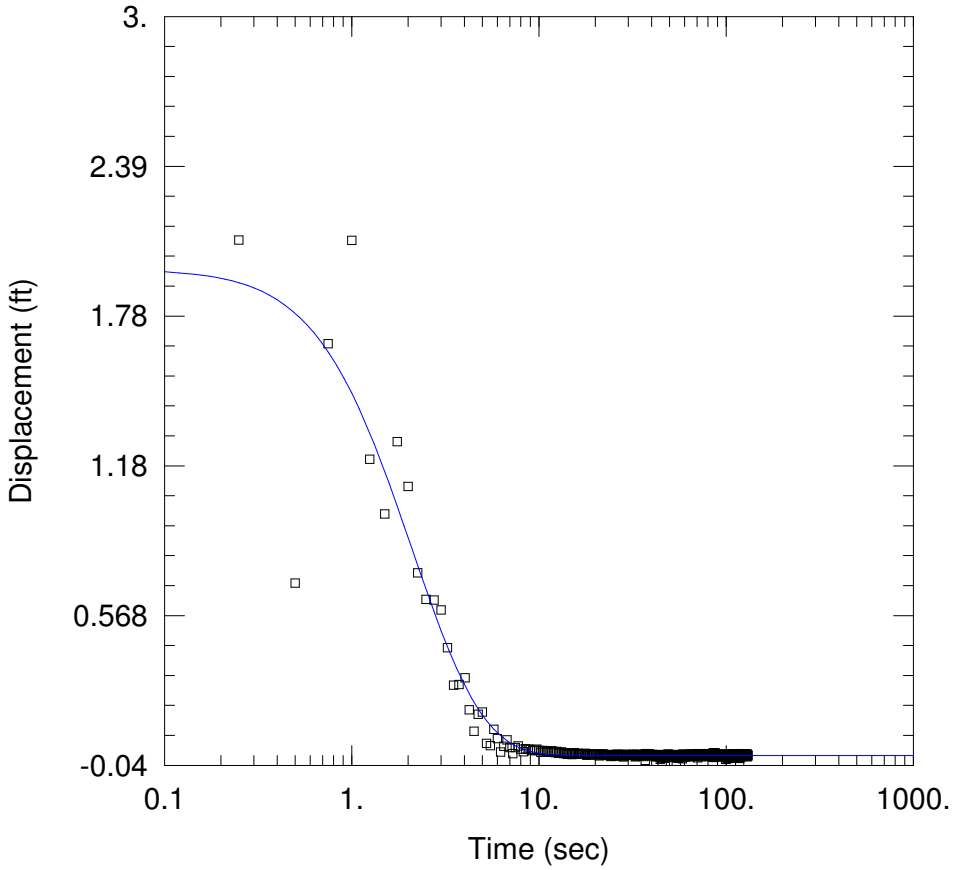
Saturated Thickness: 111.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C19-290)

Initial Displacement: 1.689 ft
Total Well Penetration Depth: 63.97 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 63.97 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 43.34 ft/day
Le = 21.88 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C19-290-30psi.aqt
Date: 03/11/13 Time: 10:52:51

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C19-290 □ e□s□reened □n □□e □ Zone
Test Date: 2/6/13

AQUIFER DATA

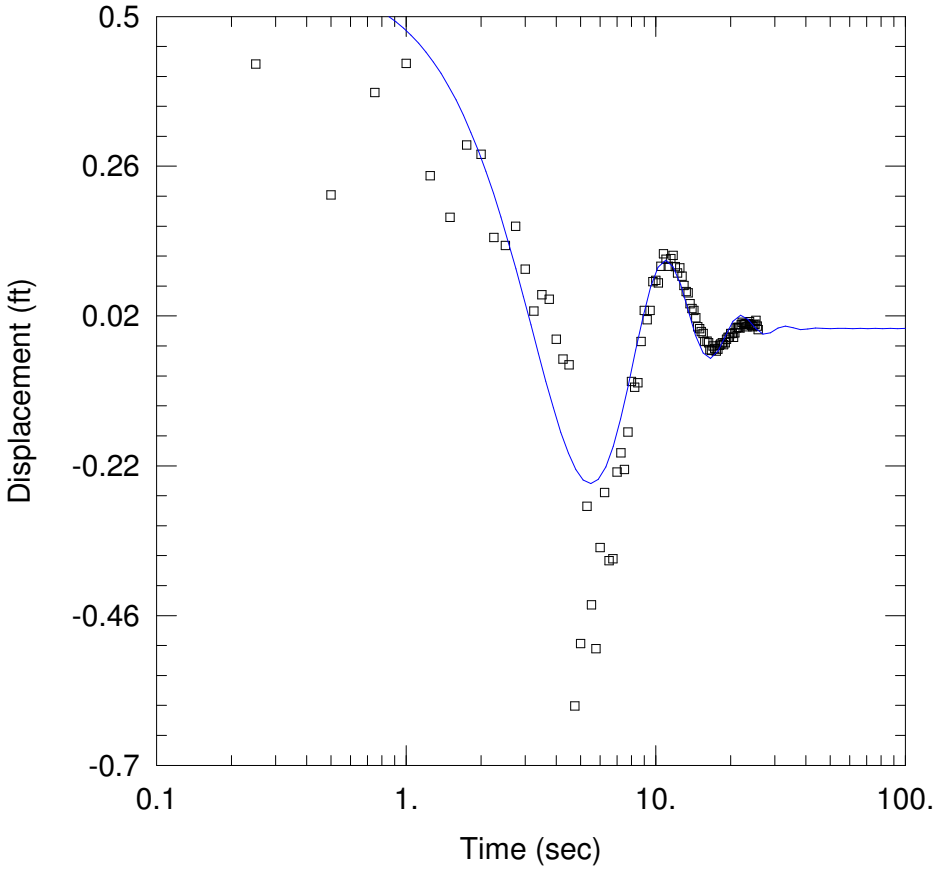
Saturated Thickness: 111.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C19-290)

Initial Displacement: 1.973 ft
Total Well Penetration Depth: 63.97 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 63.97 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 34.42 ft/day
Le = 30.2 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C19-360-5psi.aqt
Date: 03/11/13 Time: 10:52:44

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C19-360 □ e□s□reened □n □□e □ and B Zones
Test Date: 2/6/13

AQUIFER DATA

Saturated Thickness: 134.4 ft Anisotropy Ratio (Kz/Kr): 1.

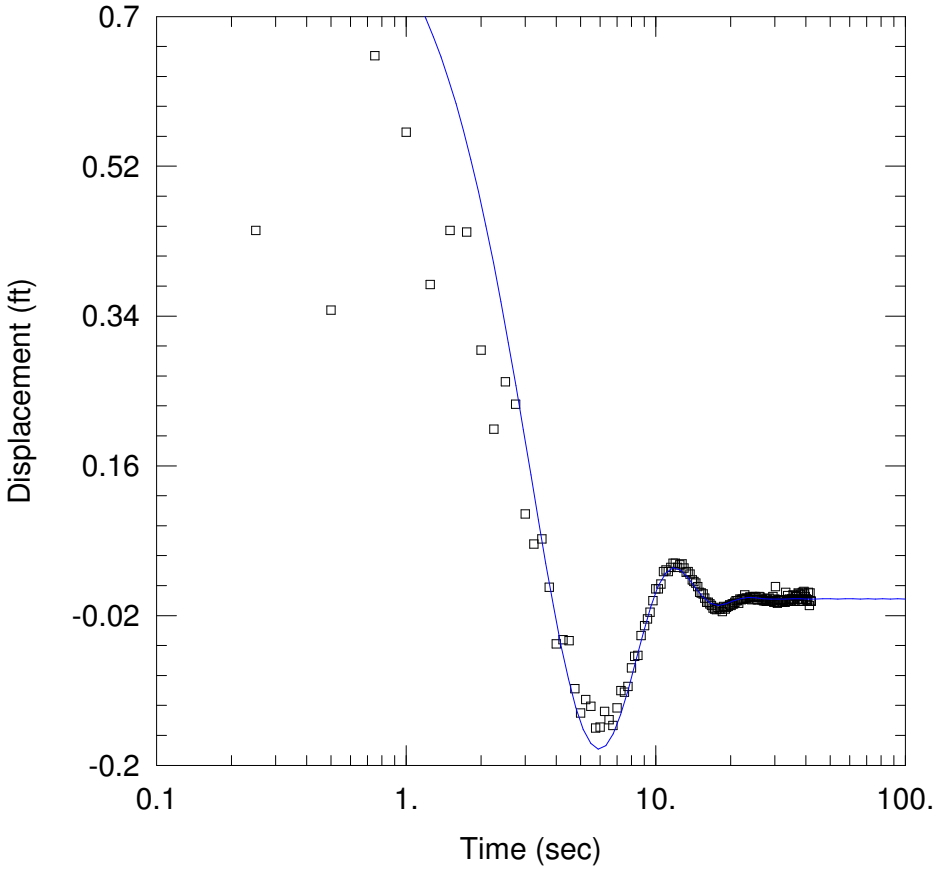
WELL DATA (NH-C19-360)

Initial Displacement: 0.565 ft
Total Well Penetration Depth: 134.4 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 134.4 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 114.3 ft/day Le = 91.92 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C19-360-10psi.aqt
Date: 03/11/13 Time: 10:52:36

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C19-360 □ e□s□reened □n □□e □ and B Zones
Test Date: 2/6/13

AQUIFER DATA

Saturated Thickness: 134.4 ft Anisotropy Ratio (Kz/Kr): 1.

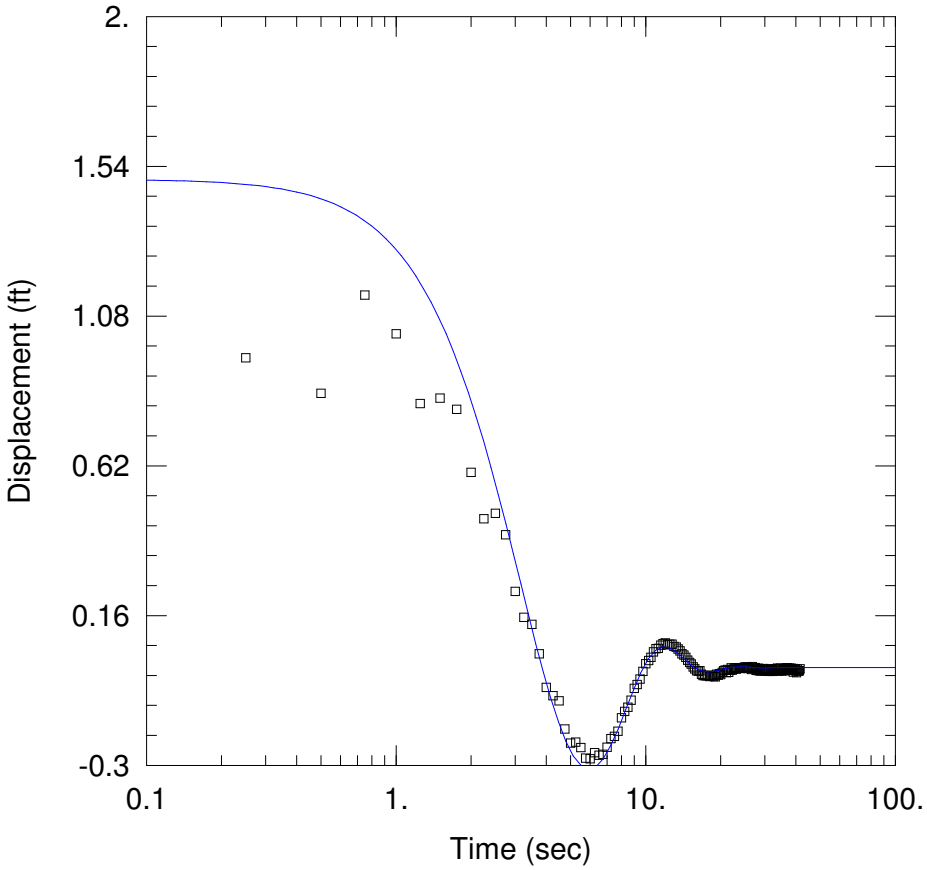
WELL DATA (NH-C19-360)

Initial Displacement: 0.87 ft
Total Well Penetration Depth: 134.4 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 134.4 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 64.26 ft/day Le = 91.92 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C19-360-20psi.aqt
Date: 03/11/13 Time: 10:52:27

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C19-360 □ e□s□reened □n □□e □ and B Zones
Test Date: 2/6/13

AQUIFER DATA

Saturated Thickness: 134.4 ft Anisotropy Ratio (Kz/Kr): 1.

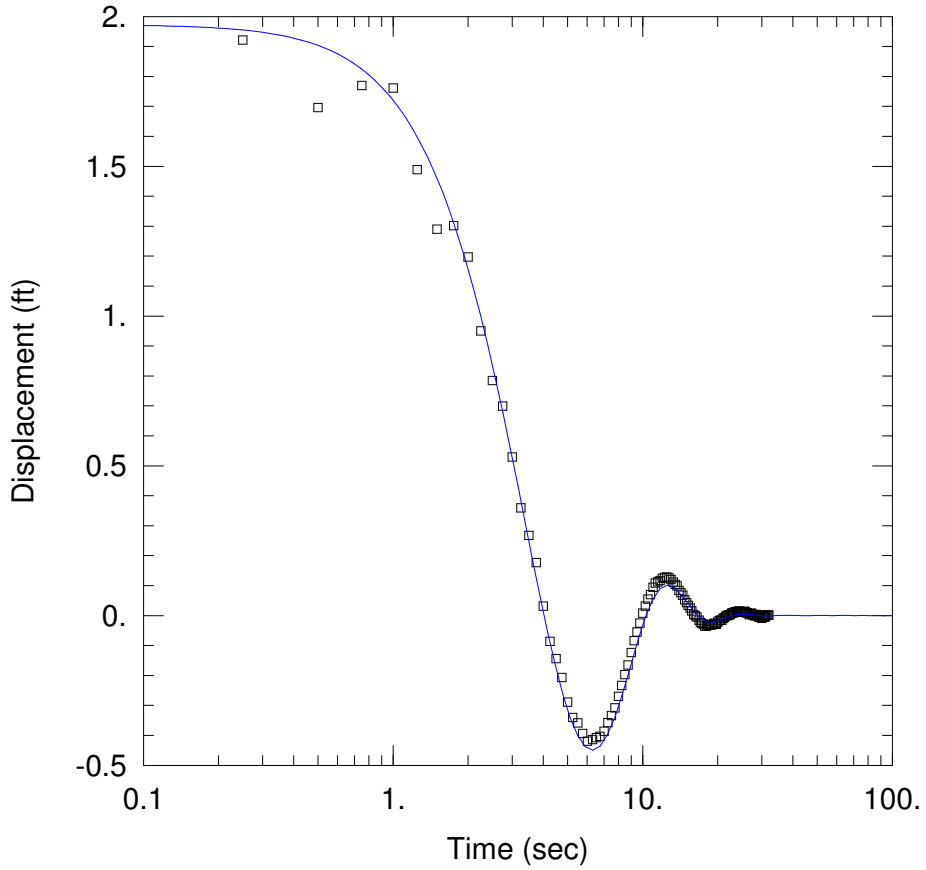
WELL DATA (NH-C19-360)

Initial Displacement: 1.5 ft
Total Well Penetration Depth: 134.4 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 134.4 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 64.28 ft/day Le = 91.92 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C19-360-30psi.aqt
Date: 03/11/13 Time: 10:52:19

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C19-360 □ e□s□reened □n □□e □ and B Zones
Test Date: 2/6/13

AQUIFER DATA

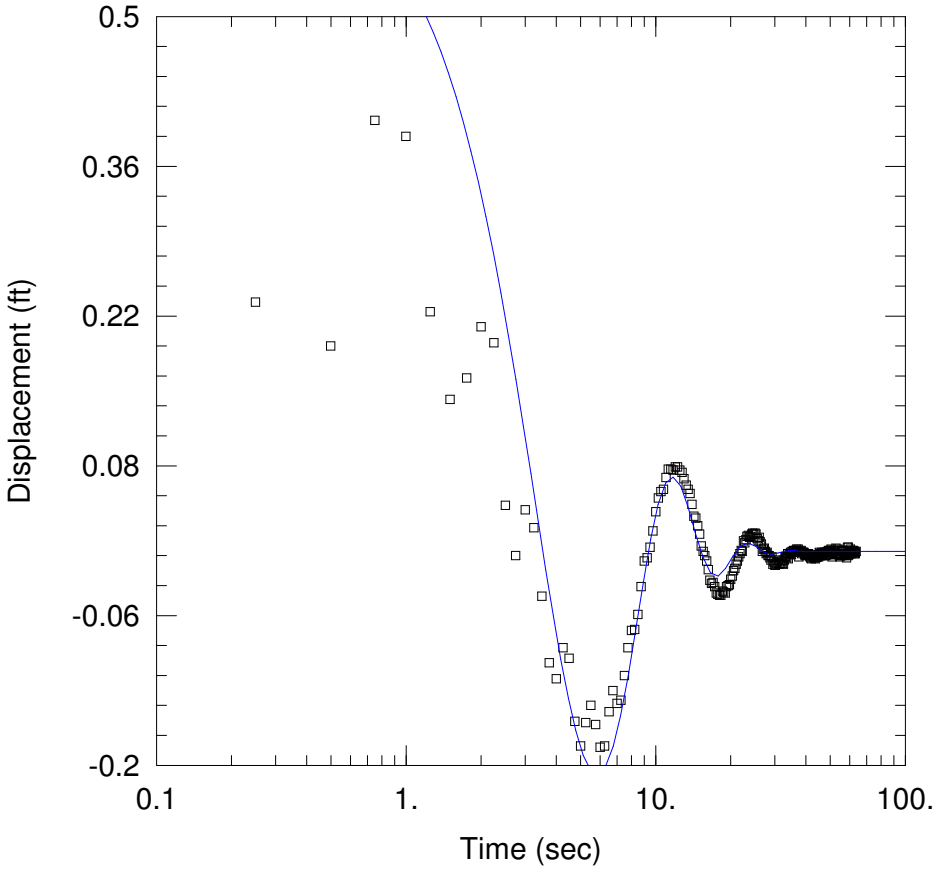
Saturated Thickness: 134.4 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C19-360)

Initial Displacement: 1.973 ft
Total Well Penetration Depth: 134.4 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 134.4 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 63. ft/day
Le = 105.5 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C22-460-5psi.aqt
Date: 03/11/13 Time: 10:45:56

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C22-460 □ e□s□reened □n □□e B Zone
Test Date: 1/29/13

AQUIFER DATA

Saturated Thickness: 167.7 ft Anisotropy Ratio (Kz/Kr): 1.

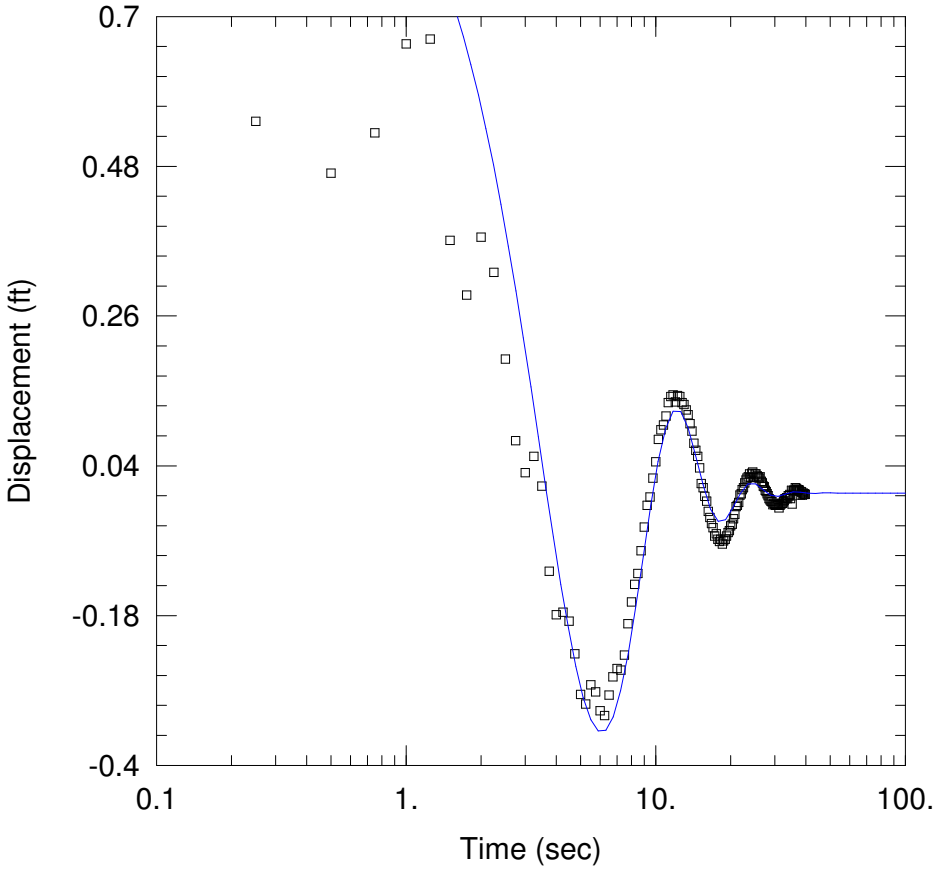
WELL DATA (NH-C22-460)

Initial Displacement: 0.623 ft
Total Well Penetration Depth: 167.7 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 167.7 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 75.6 ft/day Le = 98.61 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C22-460-10psi.aqt
Date: 03/11/13 Time: 10:46:06

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C22-460 □ e□s□reened □n □e B Zone
Test Date: 1/29/13

AQUIFER DATA

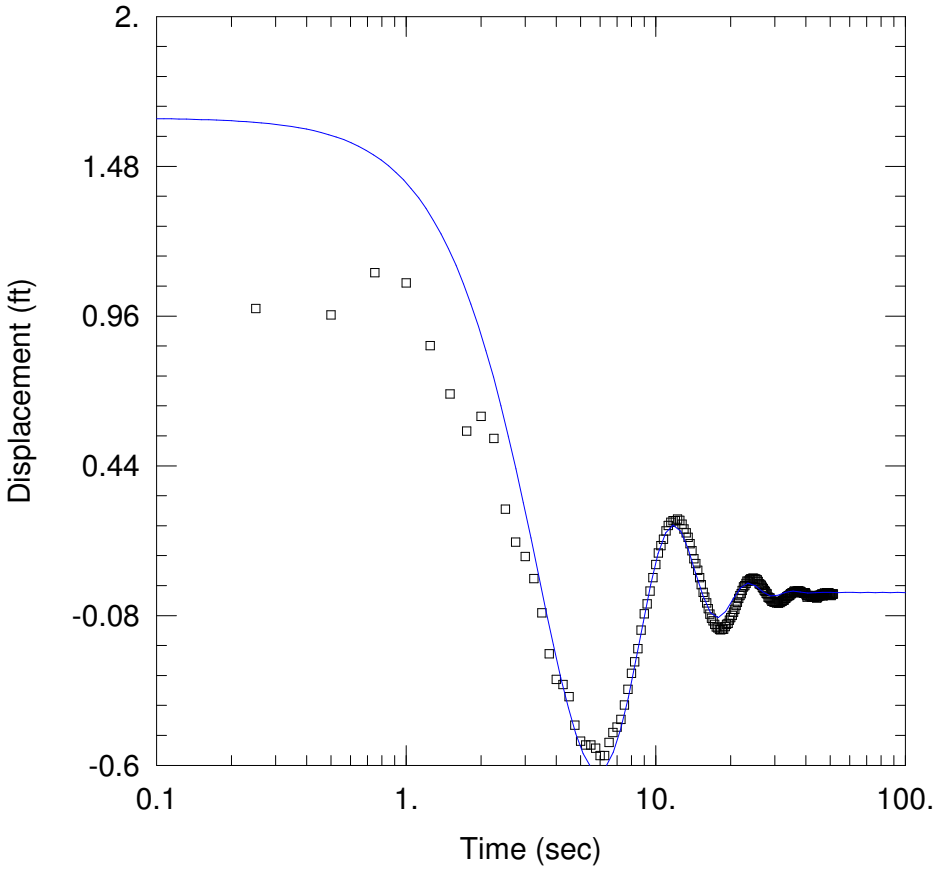
Saturated Thickness: 167.7 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C22-460)

Initial Displacement: 1.004 ft
Total Well Penetration Depth: 167.7 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 167.7 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 75. ft/day
Le = 108.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C22-460-20psi.aqt
Date: 03/11/13 Time: 10:46:14

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C22-460 □ e□s□reened □n □□e B Zone
Test Date: 1/29/13

AQUIFER DATA

Saturated Thickness: 167.7 ft Anisotropy Ratio (Kz/Kr): 1.

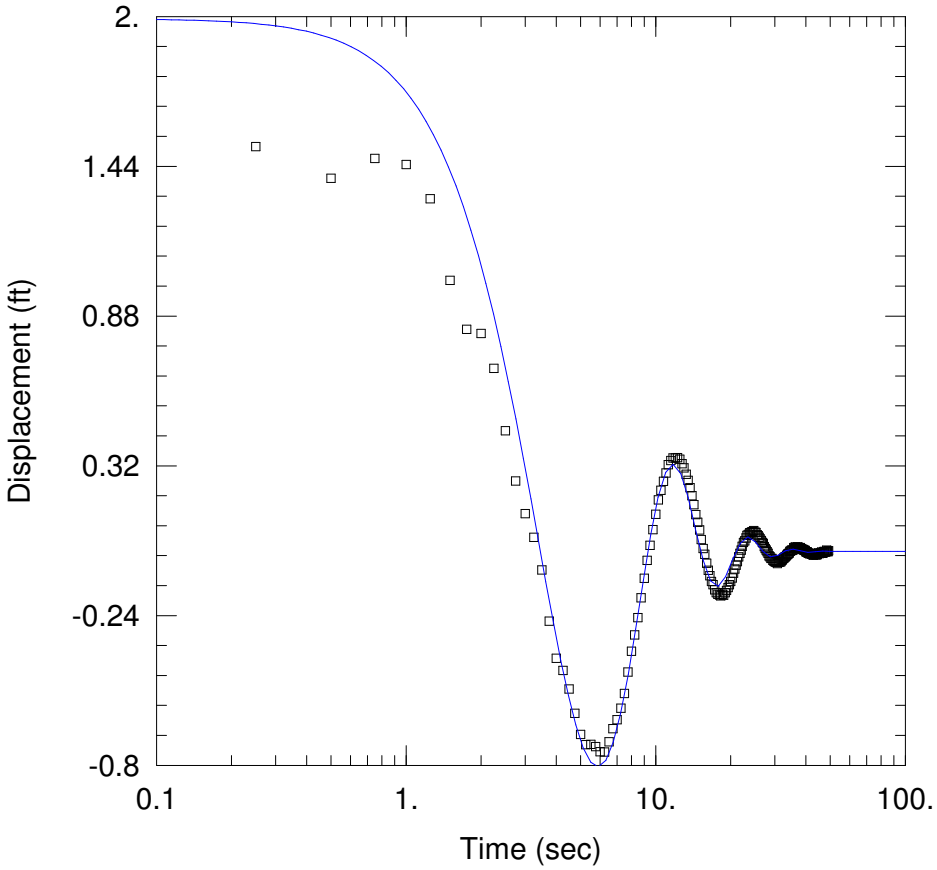
WELL DATA (NH-C22-460)

Initial Displacement: 1.648 ft
Total Well Penetration Depth: 167.7 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 167.7 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 82. ft/day Le = 103.3 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C22-460-30psi.aqt
Date: 03/11/13 Time: 10:46:22

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C22-460 □ e□s□reened □n □□e B Zone
Test Date: 1/29/13

AQUIFER DATA

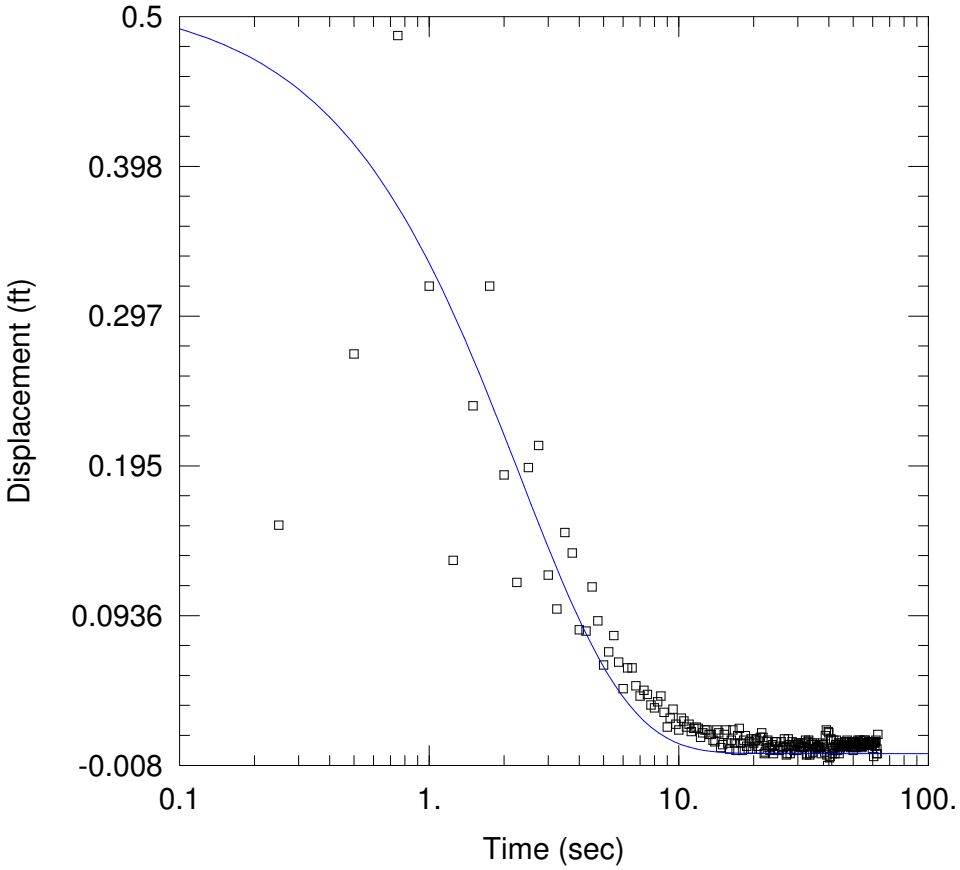
Saturated Thickness: 167.7 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C22-460)

Initial Displacement: 1.992 ft
Total Well Penetration Depth: 167.7 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 167.7 ft
Screen Length: 70. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 88. ft/day
Le = 103.3 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C23-310-5psi.aqt
Date: 03/11/13 Time: 10:46:30

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C23-310 □ e□s□reened □n □□e □ Zone
Test Date: 1/29/13

AQUIFER DATA

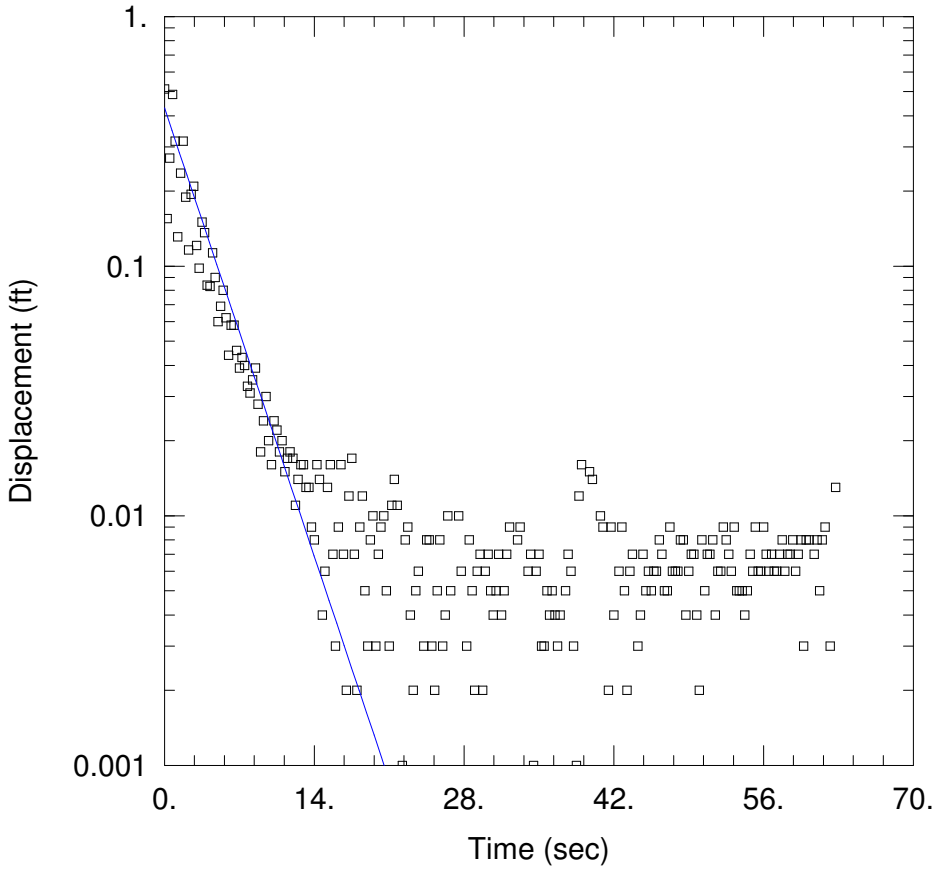
Saturated Thickness: 101.2 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C23-310)

Initial Displacement: 0.513 ft
Total Well Penetration Depth: 71.24 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.24 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 34.92 ft/day
Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C23-310-5psi_BR.aqt
Date: 03/11/13 Time: 10:46:39

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C23-310 □ e□s□reened □n □□e □ Zone
Test Date: 1/29/13

AQUIFER DATA

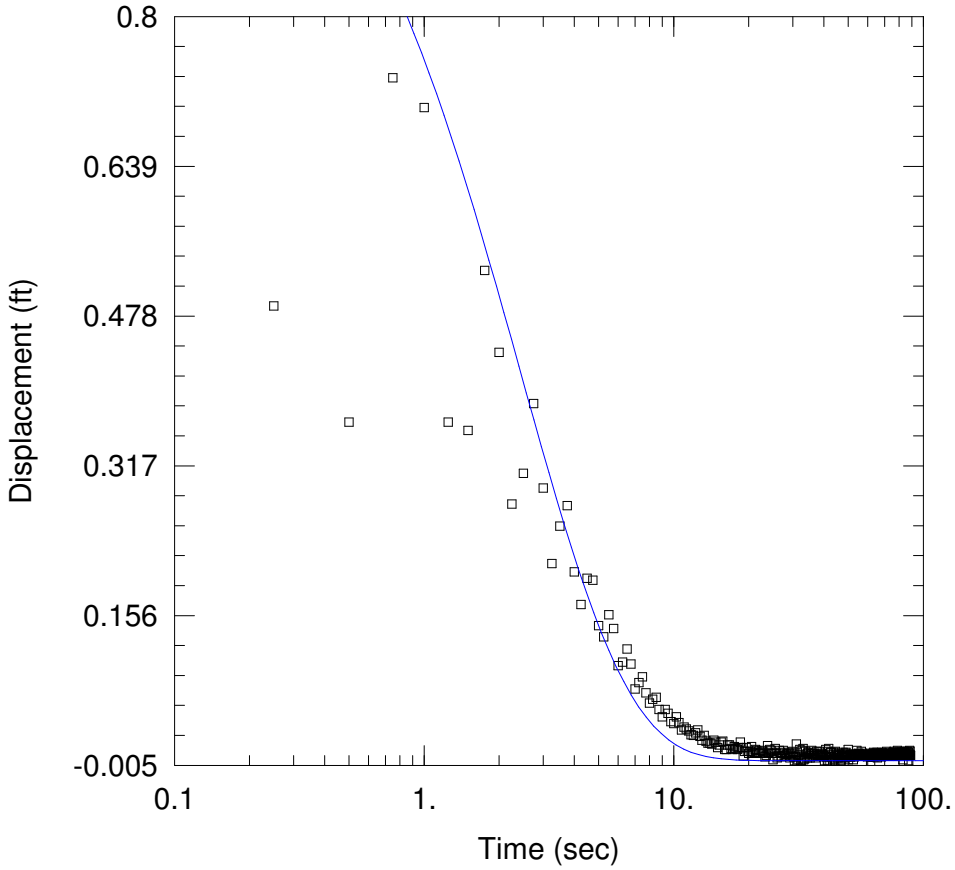
Saturated Thickness: 101.2 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C23-310)

Initial Displacement: 0.513 ft
Total Well Penetration Depth: 71.24 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.24 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 23.79 ft/day
y0 = 0.43 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C23-310-10psi.aqt
Date: 03/11/13 Time: 10:46:47

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C23-310 □ e□s□reened □n □□e □ Zone
Test Date: 1/29/13

AQUIFER DATA

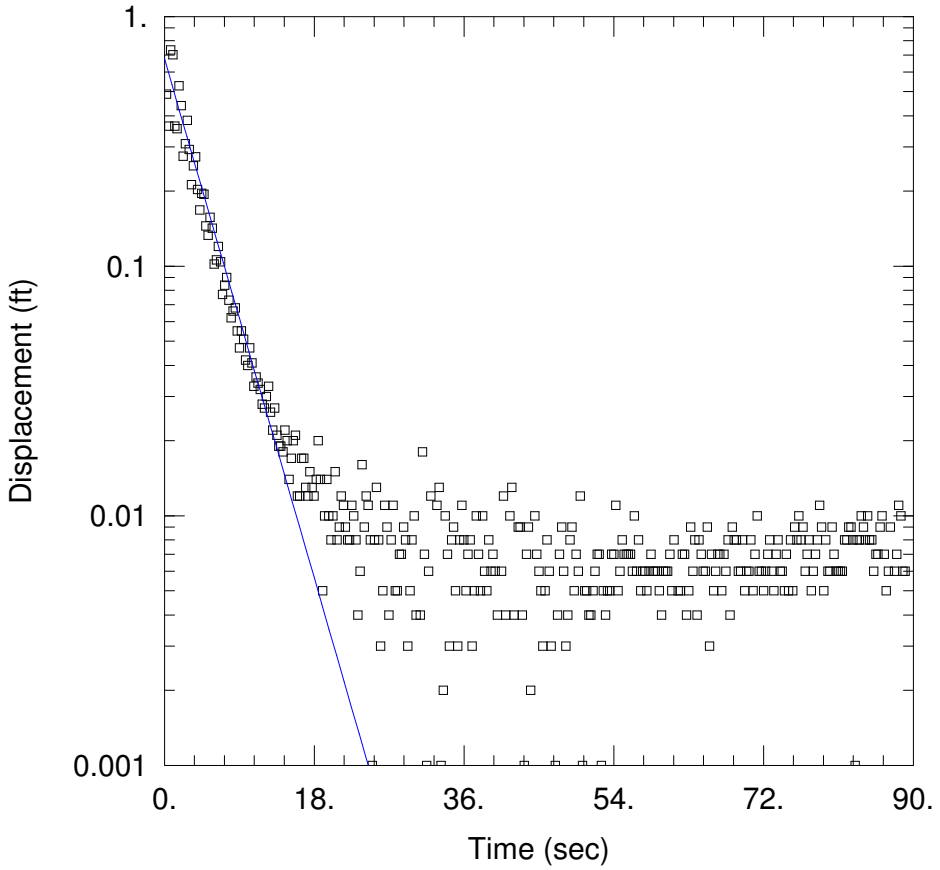
Saturated Thickness: 101.2 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C23-310)

Initial Displacement: 1.137 ft
Total Well Penetration Depth: 71.24 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.24 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 33.17 ft/day
Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C23-310-10psi_BR.aqt
Date: 03/11/13 Time: 10:46:56

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C23-310 □ e□s□reened □n □□e □ Zone
Test Date: 1/29/13

AQUIFER DATA

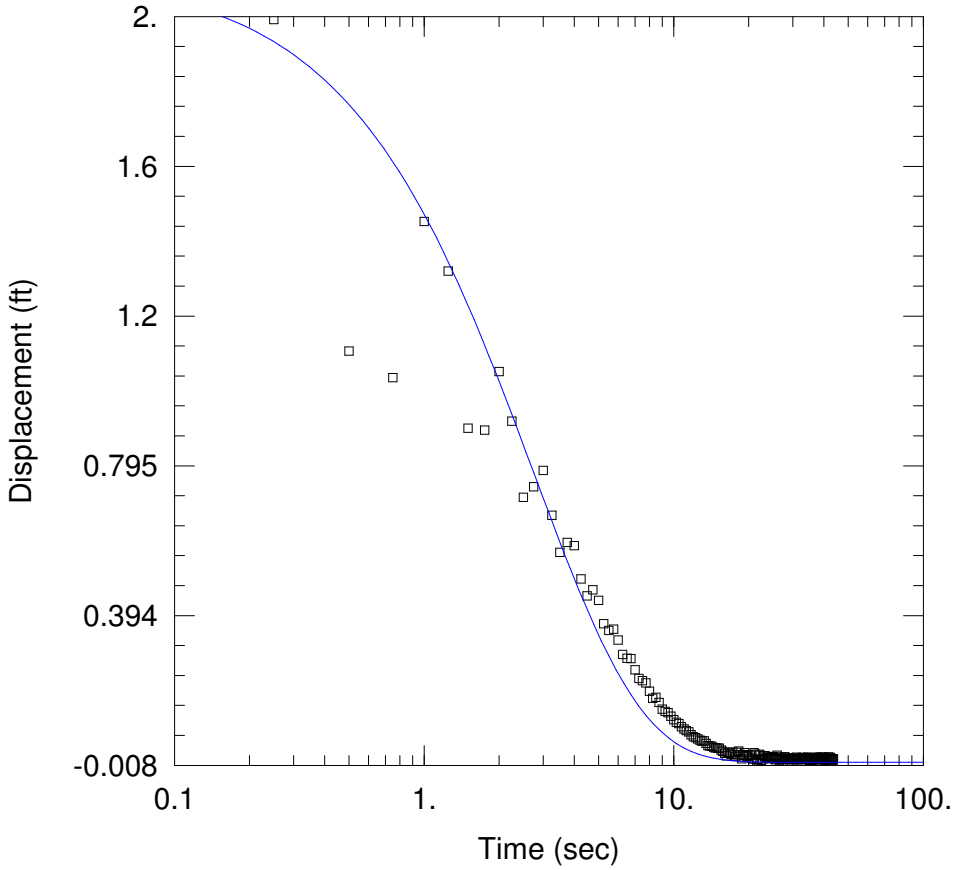
Saturated Thickness: 101.2 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C23-310)

Initial Displacement: 1.137 ft
Total Well Penetration Depth: 71.24 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.24 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 21.44 ft/day
y0 = 0.6775 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C23-310-20psi.aqt
Date: 03/11/13 Time: 10:47:06

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C23-310 □ e□s□reened □n □e □ Zone
Test Date: 1/29/13

AQUIFER DATA

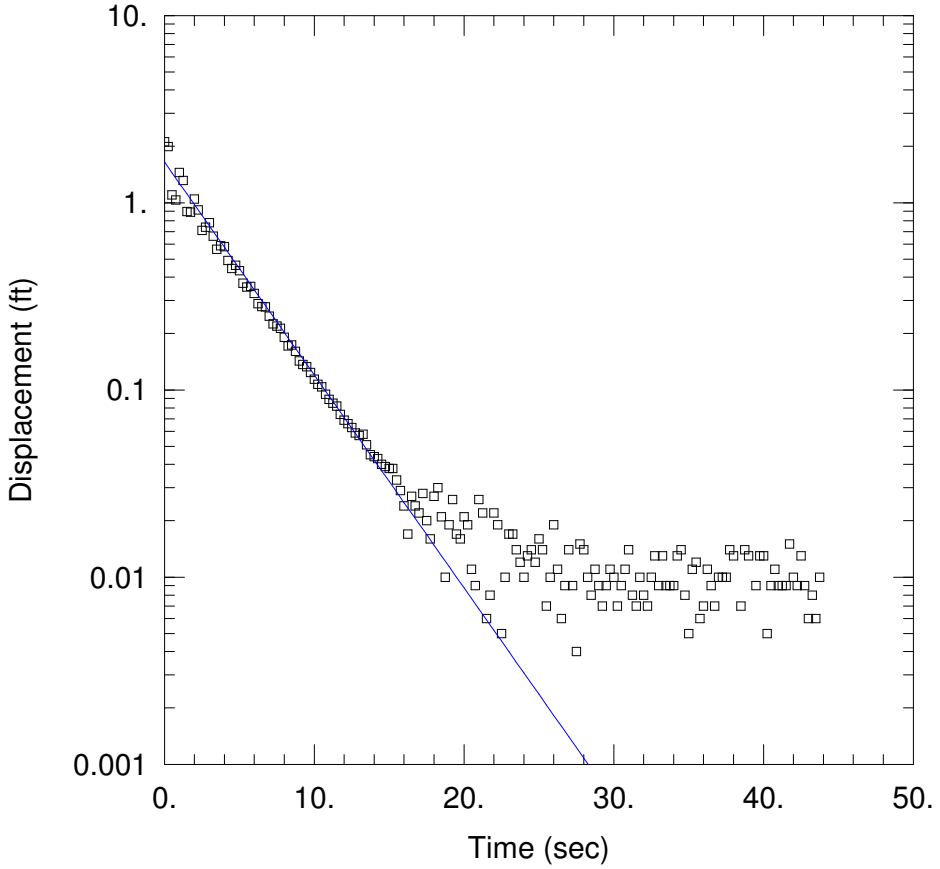
Saturated Thickness: 101.2 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C23-310)

Initial Displacement: 2.116 ft
Total Well Penetration Depth: 71.24 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.24 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 29.39 ft/day
Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C23-310-20psi_BR.aqt
Date: 03/11/13 Time: 10:47:15

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C23-310 □ e□s□reened □n □e □ Zone
Test Date: 1/29/13

AQUIFER DATA

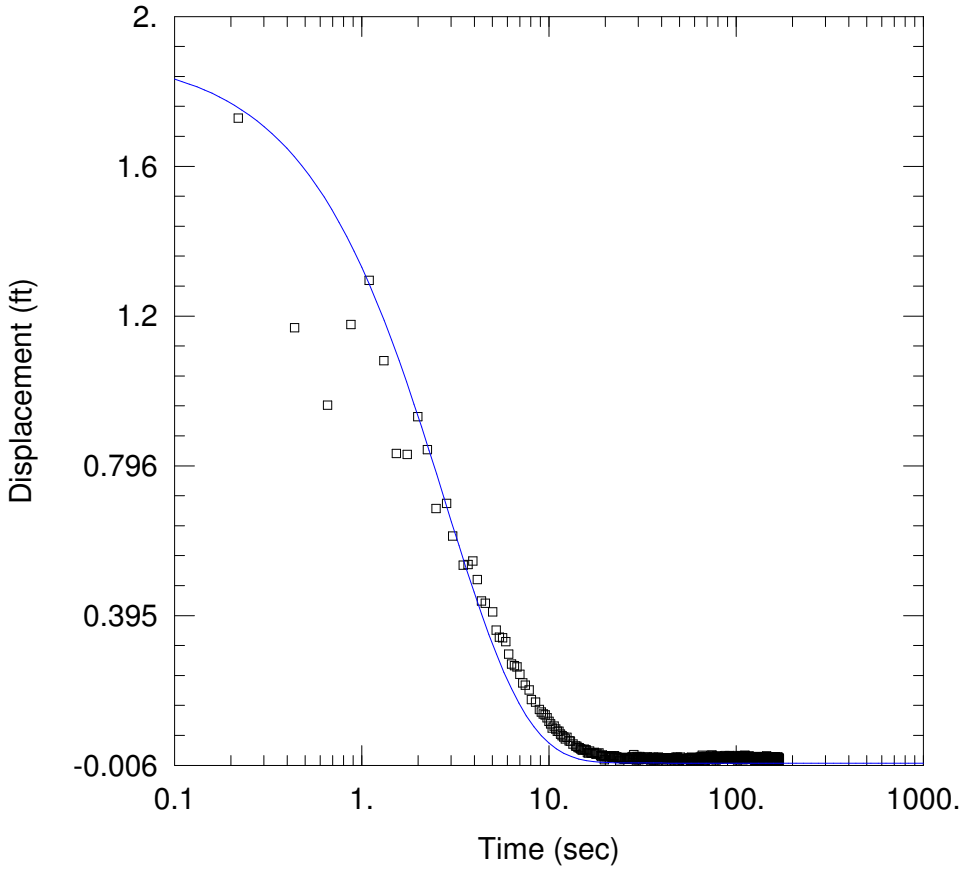
Saturated Thickness: 101.2 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C23-310)

Initial Displacement: 2.116 ft
Total Well Penetration Depth: 71.24 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.24 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 21.1 ft/day
y0 = 1.649 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C23-310-20psi-2.aqt
Date: 03/11/13 Time: 10:47:23

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C23-310 □ e□s□reened □n □□e □ Zone
Test Date: 1/29/13

AQUIFER DATA

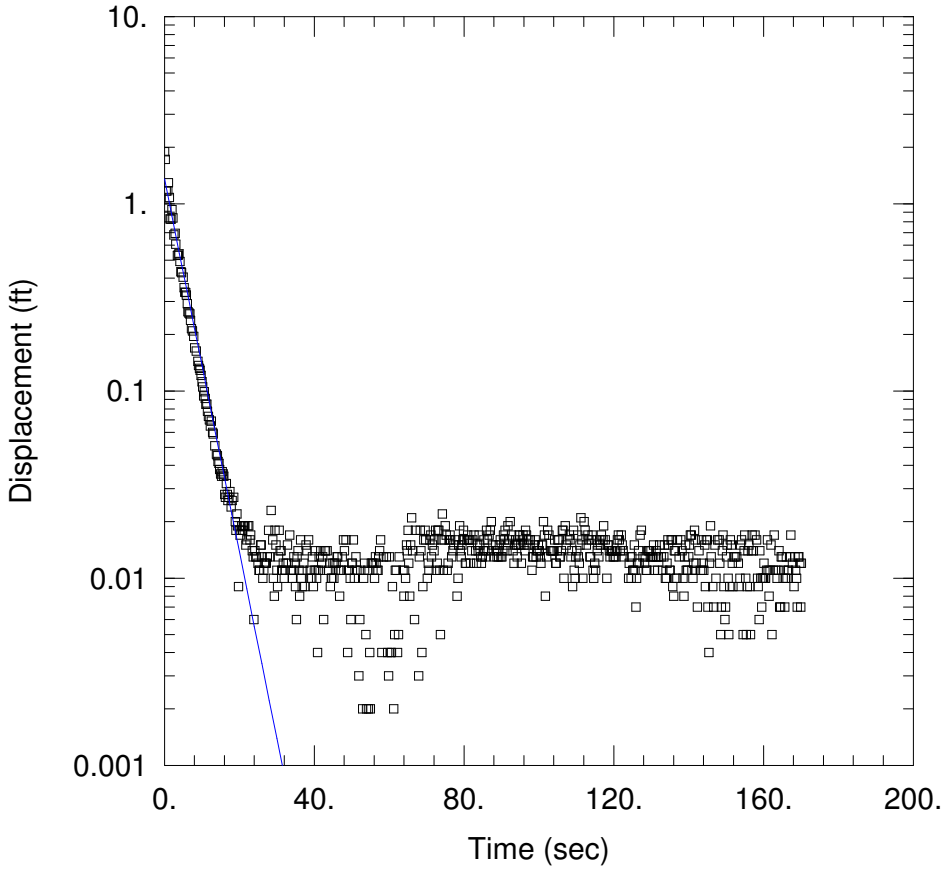
Saturated Thickness: 101.2 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C23-310)

Initial Displacement: 1.898 ft
Total Well Penetration Depth: 71.24 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.24 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Springer-Gelhar
K = 28.78 ft/day
Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C23-310-20psi-2_BR.aqt
Date: 03/11/13 Time: 10:47:31

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C23-310 □ e□s□reened □n □□e □ Zone
Test Date: 1/29/13

AQUIFER DATA

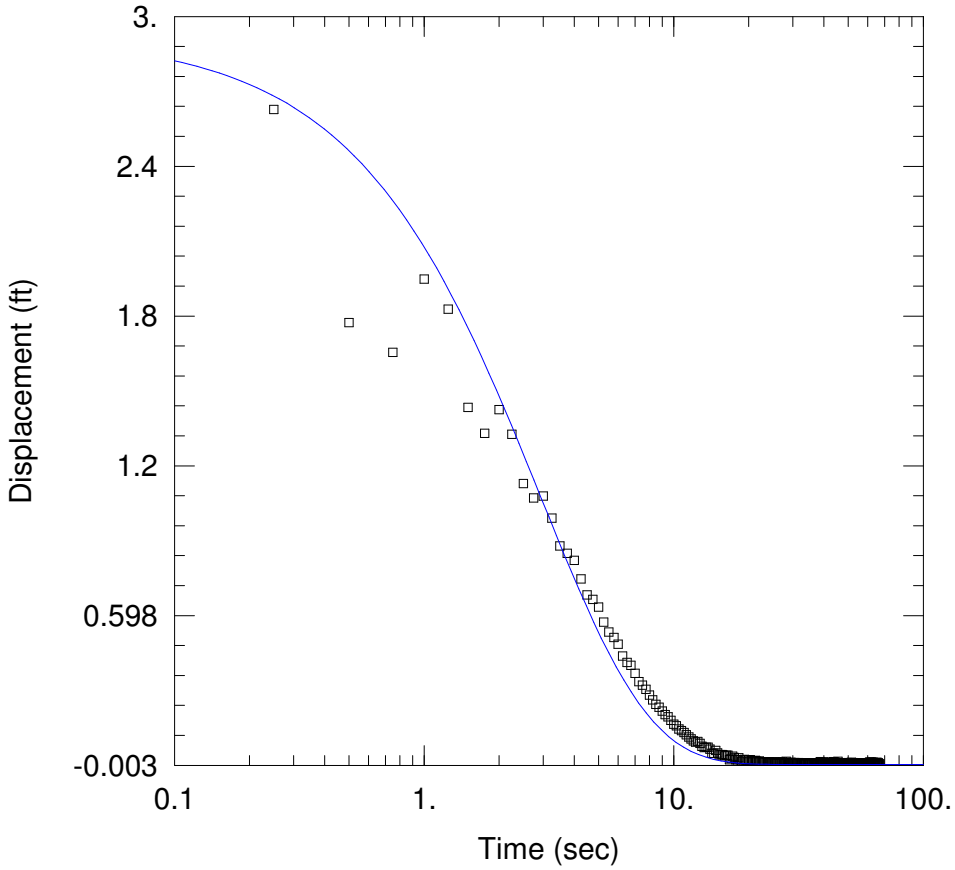
Saturated Thickness: 101.2 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C23-310)

Initial Displacement: 1.898 ft
Total Well Penetration Depth: 71.24 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.24 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 18.48 ft/day
y0 = 1.359 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C23-310-30psi.aqt
Date: 03/11/13 Time: 10:47:40

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C23-310 □ e□s□reened □n □e □ Zone
Test Date: 1/29/13

AQUIFER DATA

Saturated Thickness: 101.2 ft Anisotropy Ratio (Kz/Kr): 1.

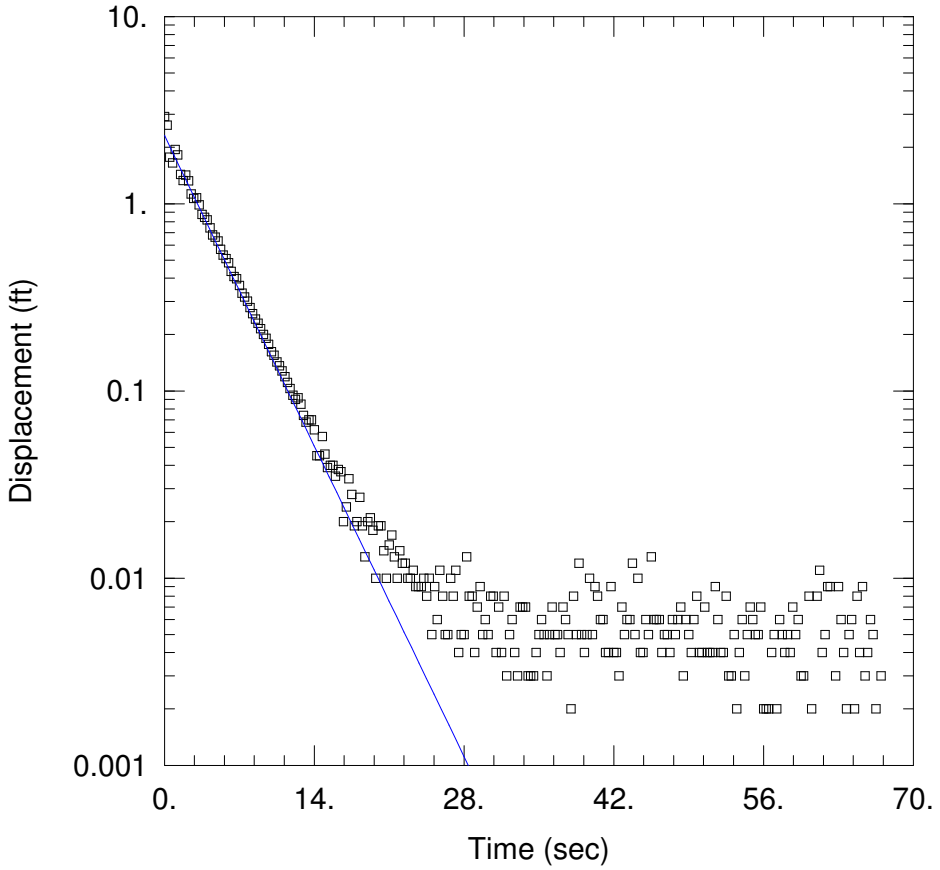
WELL DATA (NH-C23-310)

Initial Displacement: 2.919 ft
Total Well Penetration Depth: 71.24 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.24 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 27.5 ft/day Le = 0.1 ft



WELL TEST ANALYSIS

Data Set: C:\...\NH-C23-310-30psi_BR.aqt
Date: 03/11/13 Time: 10:47:48

PROJECT INFORMATION

Company: AMEC
Location: NHOU
Test Well: NH-C23-310 □ e□s□reened □n □e □ Zone
Test Date: 1/29/13

AQUIFER DATA

Saturated Thickness: 101.2 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (NH-C23-310)

Initial Displacement: 2.919 ft
Total Well Penetration Depth: 71.24 ft
Casing Radius: 0.1667 ft
Static Water Column Height: 71.24 ft
Screen Length: 60. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 21.97 ft/day
y0 = 2.314 ft

ATTACHMENT C

Data Validation Narrative

ATTACHMENT C

DATA VALIDATION REPORTS INDEX

Phase 1 Pre-Design Investigation
North Hollywood Operable Unit

Sampling Date	Lab Report Number	Samples Included
12/4/2012	12-12-0198	NH-C16-390_375
		NH-C16-390_343
		TB-1_120412
		EB-1_120412
		FB-1_120412
12/5/2012	12-12-0278	GW18B_402
		TB-2_120512
		EB-2_120512
12/6/2012	12-12-0392	4919D_295
		TB-3_120612
		EB-3_120612
12/6/2012	12-12-0393	GW-18B_405
		GW-18B_405-DUP-1
12/7/2012	12-12-0492	NH-C18-365_308
		NH-C18-365_348
		TB-4_120712
		EB-4_120712
12/10/2012	12-12-0592	LA1-CW05-339
		LA1-CW05-356
		TB-5_121012
		EB-5_121012
12/11/2012	12-12-0681	NH-C18-270_223
		NHE-1_240
		TB-6_121112
		EB-6_121112
12/12/2012	12-12-0779	NH-C13-385_338
		NH-C13-385_363
		TB-7_121212
		EB-7_121212
12/13/2012	12-12-0871	GB19B_401.5
		GB19B_401.5-DUP-2
		GB19B_405.5
		TB-8_121312
		EB-8_121312
12/14/2012	12-12-1004	NH-C10-360_313
		NH-C10-360_340
		TB-9_121412
		EB-9_121412
12/18/2012	12-12-1196	NH-C24-305_247
		TB-10_121812
		EB-10_121812
12/19/2012	12-12-1314	NH-C20-380_361
		NH-C20-380_322
		TB-11_121912
		EB-11_121912

ATTACHMENT C

DATA VALIDATION REPORTS INDEX

Phase 1 Pre-Design Investigation
North Hollywood Operable Unit

12/20/2012	12-12-1420	4918A_297.5
		4918A_483
		TB-12_122012
		EB-12_122012
12/21/2012	12-12-1533	NH-C19-290_233
		NH-C19-360_349
		NH-C19-360_303
		TB-13_122112
		EB-13_122112
12/26/2012	12-12-1627	NH-C12-360_343
		NH-C12-360_313
		NH-C14-250_203
		TB-14_122612
		EB-14_122612
12/27/2012	12-12-1698	NH-C01-450_447
		NH-C01-450_403
		TB-15_122712
		EB-15_122712
12/28/2012	12-12-1763	NH-C23-400_397
		NH-C23-400_343
		NH-C23-310_253
		TB-16_122812
		EB-16_122812
1/2/2013	13-01-0042	NH-C17-339_281
		NH-C17-339_313
		EB-17_010213
		TB-17_010213
1/3/2013	13-01-0107	NH-C21-260_213
		NH-C21-260_213_DUP-3
		EB-18_010313
		TB-18_010313
1/4/2013	13-01-0196	NH-C21-340_283
		NH-C21-340_325
		NH-C21-340_325_DUP-4
		EB-19_010413
		TB-19_010413
1/7/2013	13-01-0313	4909C-293
		4909C-392
		4909C-398
		EB-20_010713
		TB-20_01013
1/11/2013	13-01-0662	NH-C19-290_233
		NH-C19-290_233_DUP-5
		NH-C19-290_243
		NH-C19-290_253
		NH-C19-290_263
		NH-C19-290_273
		NH-C19-290_283

ATTACHMENT C

DATA VALIDATION REPORTS INDEX

Phase 1 Pre-Design Investigation
North Hollywood Operable Unit

1/11/2013	13-01-0663	NH-C19-360_303
		NH-C19-360_313
		NH-C19-360_323
		NH-C19-360_333
		NH-C19-360_343
		NH-C19-360_343_DUP-6
		NH-C19-360_353
		NH-C23-310_253
		NH-C23-310_263
		NH-C23-310_273
		NH-C23-310_283
		NH-C23-310_293
		NH-C23-310_303
		NH-C23-400_343
		NH-C23-400_353
		NH-C23-400_363
		NH-C23-400_373
		NH-C23-400_383
		NH-C23-400_393
		TB-21_011113